

Bureau of Land Management, Roswell Field Office
Environmental Assessment Checklist, EA# NM-510-2008-110
Lookout & 4-Mile Draw Wells, McKay

Resources	Not Present on Site	No Impacts	May Be Impacts	Mitigation Included	BLM Reviewer	Date
Air Quality			X	X	SWA Spec/Hydro. /s/ Michael McGee	8/15/08
Soil			X	X		
Watershed Hydrology			X	X		
Floodplains	X					
Water Quality - Surface			X	X		
Water Quality - Ground			X	X	Geologist /s/ John S. Simitz	7/22/08
Cultural Resources			X		Archaeologist /s/ Rebecca Hill	25Jun08
Native American Religious Concerns	X					
Paleontology	X					
Areas of Critical Environmental Concern	X				/s/J H Parman Plan & Env. Coord.	6/27/08
Farmlands, Prime or Unique	X				/s/ Sanderford Realty	8/20/08
Rights-of-Way		X				
Invasive, Non-native Species			X	X	Range Mgmt. Spec. /s/ Joseph M. Navarro	8/4/08
Vegetation			X	X		
Livestock Grazing			X	X		
Wastes, Hazardous or Solid		X			Nat. Resource Spec. /s/ Brian Novosak	7/22/08
Threatened or Endangered Species	X				/s/ D Baggao Biologist	7/5/08
Special Status Species	X					
Wildlife			X	X		
Wetlands/Riparian Zones	X					
Wild and Scenic Rivers	X				Outdoor Rec. Plnr. /s/Bill Murry	8/14/08
Wilderness	X					
Recreation		X				
Visual Resources			X			
Cave/Karst				X		
Environmental Justice		X			Nat. Resource Spec. /s/ Brian Novosak	7/22/08
Public Health and Safety		X				
Solid Mineral Resources		√			Geo/SPS /s/ Jerry Dutchover	07/30/08
Fluid Mineral Resources		X			Pet Engr/Geo /s/ John S. Simitz	7/22/08

Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 W. Second Street
Roswell, New Mexico 88201

Project: Lookout and 4-Mile Gas Wells
Applicant: McKay Oil Corporation
Roswell Field Office: (575) 627-0272

EA Log Number: NM-510-2008-110
Lease Number: NM-36192, NM-36193
File Code: 3160

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined the proposed action is not expected to have significant impacts on the environment and that preparation of an Environmental Impact Statement is not warranted.

Prepared by:

/s/ Brian A. Novosak

08/26/2008

Date

Brian A. Novosak
Natural Resource Specialist

Approved by:

/s/ Angel Mayes

8/27/2008

Date

Angel Mayes,
Assistant Field Manager,
Lands and Minerals

**BUREAU OF LAND MANAGEMENT
ROSWELL FIELD OFFICE**

ENVIRONMENTAL ASSESSMENT # NM-510-2008-110

1.0 Introduction

This site-specific analysis tiers into and incorporates by reference the information and analysis contained in the 1997 Roswell Resource Area Resource Management Plan (RMP), which is available for review at the Roswell Field Office. This project EA addresses site-specific resources and/or impacts that are not specifically covered within the RMP, as required by the National Environmental Policy Act of 1969 (NEPA), as amended (Public Law 91-90, 42 U.S.C. 4321 et seq.).

1.1 Purpose and Need

The purpose for the proposal is to analyze the impacts of the development necessary to produce natural gas on Federal mineral leases. It is the policy of the BLM to make mineral resources available for disposal and to encourage development of mineral resources to meet National, regional, and local needs. The Mineral Leasing Act of 1920 (MLA), as amended [30 USC 181 et seq.], authorizes the BLM to issue oil and gas leases for the exploration of oil and gas, and permit the development of those leases. Approved Applications for Permit to Drill (APD), issued by the BLM, would authorize the applicant to construct and drill proposed wells.

1.2 Conformance with Applicable Land Use Plan and Other Environmental Assessments

Pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21, this site-specific EA tiers to and incorporates by reference the information and analysis contained in the 1997 Roswell RMP, as amended. The RMP is available for review at the Roswell Field Office, Roswell, New Mexico. This EA addresses the resources and impacts on a site-specific basis as required by the National Environmental Policy Act (NEPA) of 1969, as amended (Public Law 91-90, 42 USC 4321 et seq.) and conforms to the Roswell Resource Management Plan October 1997 as amended, Mineral Leasing Act of 1920 (MLA), as amended [30 USC 181 et seq.], and Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761).

1.3 Federal, State or Local Permits, Licenses or Other Consultation Requirements

EPA has finalized changes to its storm water regulations as they apply to field operations, including construction activities, at oil and gas exploration, production, processing or treatment operations or transmission facilities. This final action codifies changes resulting from Clean Water Act amendments in the Energy Policy Act of 2005 signed by the President on August 8, 2005. The Administrator of EPA signed the final rule on June 7, 2006 which was published in the Federal Register, and is effective on June 12, 2006. You can view the rule and a descriptive Fact Sheet at: <http://www.epa.gov/npdes/stormwater/oilgas>. The final rule specifies that storm

water discharges from oil and gas-related construction activities are exempt from NPDES permit coverage, except in very limited instances. EPA interprets this exclusion to apply to construction of drilling sites, waste management pits, and access roads, as well as construction of the transportation and treatment infrastructure such as pipelines, natural gas treatment plants, natural gas pipeline compressor stations, and crude oil pumping stations. Construction activities that result in a discharge of a reportable quantity release or that contribute pollutants (other than non-contaminated sediment from construction) to a violation of a water quality standard are still subject to permit coverage. This final action also adds complementary text encouraging operators of oil and gas field activities or operations to implement and maintain Best Management Practices (BMPs) to minimize erosion and control sediment during and after construction activities to help ensure protection of surface water quality during storm events. This rulemaking applies to all States, Federal lands and Indian Country regardless of whether EPA or a State is the NPDES permitting authority. However, this rule is not intended to interfere with the States' authority to regulate any discharges, pursuant to state law, through a non-NPDES permit program.

Roswell Field Office staff reviewed the proposed action and determined it would be in compliance with threatened and endangered species management guidelines outlined in Biological Assessments Cons. #2-22-96-F-102, Cons. #22420-2006-I-0144, and Cons. #22420-2007-TA-0033. No further consultation with the U.S. Fish and Wildlife Service is required. .

Compliance with Section 106 responsibilities of the National Historic Preservation Act are adhered to by following the BLM – New Mexico State Historic Preservation Officer protocol agreement, which is authorized by the National Programmatic Agreement between the *BLM*, the *Advisory Council on Historic Preservation*, and the *National Conference of State Historic Preservation Officers*, and other applicable BLM handbooks.

Additionally, the Operator is required to:

- Comply with all applicable Federal, State and local laws and regulations.
- Obtain the necessary permits for the drilling, completion and production of these wells including water rights appropriations, the installation of water management facilities, water discharge permits, and relevant air quality permits.
- Certify that a Surface Use Agreement has been reached with private landowners where required.

The proposed project would not be in conflict with any State, local, or county plans.

2.0 Alternatives Including the Proposed Action

2.1 Alternative A – No Action

The BLM NEPA Handbook (H-1790-1) and the National Environmental Policy Act and associated Code of Federal Regulations state that for EAs on externally initiated proposed actions, the No Action Alternative means that the proposed activity would not take place. The No Action Alternative is presented for baseline analysis of resource impacts, and if selected, would deny the approval of the proposed application. Current land and resource uses would continue to occur in the proposed project area. No mitigation measures would be required.

2.2 Alternative B – Proposed Action

McKay Oil Corporation submitted the Applications for Permit to Drill for the 4 Mile Draw Federal C #8, 4 Mile Draw Federal D #7, Lookout C Federal #3, Lookout C Federal #8, and Lookout D Federal #8 on June 11, 2008. The onsite consultations for all the wells were conducted on June 26, 2008.

Table 2.2.1 Proposed Well Information:

Well Name	Number	Location	County	Applicant	Lease Number	Lease Issued	Surface Owner
4 Mile Draw Federal C	8	Unit E, Sec. 15 T6S-R22E	Chaves	McKay Oil Corporation	NM-36193	04/01/1981	BLM
4 Mile Draw Federal D	7	Unit L, Sec. 15 T6S-R22E	Chaves	McKay Oil Corporation	NM-36193	04/01/1981	BLM
Lookout C Federal	3	Unit L, Sec. 10 T6S-R22E	Chaves	McKay Oil Corporation	NM-36192	04/01/1981	BLM
Lookout C Federal	8	Unit H, Sec. 9 T6S-R22E	Chaves	McKay Oil Corporation	NM-36192	04/01/1981	BLM
Lookout D Federal	8	Unit B, Sec. 9 T6S-R22E	Chaves	McKay Oil Corporation	NM-36192	04/01/1981	BLM

1. **WELL PADS:** The construction of the proposed well pads will be 300' long by 220' wide, including a 100' by 50' Reserve Pit. The reserve pit will be constructed so that when it is closed it will be 4 feet below original earth surface level. Standard oilfield construction equipment consisting of; track-type tractors, motor graders, dump trucks, and water trucks would be used to construct the access road and well pad. A rotary drilling rig would be used to drill the well to total measured depth (MD). Associated production facilities (e.g., pipeline, separator, storage tanks, etc.) would be installed during the production phase of this well. See Table 2.2.2.
2. **ACCESS ROADS:** The proposed access road, as described in all the APDs submitted June 11, 2008, are listed in Table 2.2.2 and Exhibit C. They originate from an established unnamed caliche roads used to access existing well pad locations. The

unnamed roads originate from the Camas County Road, Chaves County, New Mexico. All new construction will be on lease and will not require a right-of-way. The new access roads will be surfaced with sand, gravel, and caliche as needed. No gates or cattle guards will be constructed or installed as they are already in place. The access roads shall have a driving surface (travelway) of 14 feet, with no more 30-foot wide surface disturbance. A summary of the amount of surface disturbance is listed in Table 4.0.1.

3. PIPELINE: McKay Oil Corporation is proposing to install 2" diameter steel low pressure (30-50 psi) pipeline for approximately 50' long. As the pipeline is on lease, no BLM issued right-of-way (ROW) will be required. The new pipeline will tie-in with an existing pipeline (BLM ROW NM-067286). See Table 2.2.2 Proposed Action Summary for details.

Table 2.2.2 Proposed Action Summary

Well Name	Well Pad	Reserve Pit	Total Measured Depth (MD)	On-Lease Access Road	New Construction	Pad Access	On-Lease Pipeline Tie-in
4 Mile Draw Federal C #8	300' x 220'	100' x 50'	4000'	225' x 20'	Yes	Northeast	SW ¹ / ₄ NW ¹ / ₄ , Section 15, T. 6 S., R. 22 E
4 Mile Draw Federal D #7	300' x 220'	100' x 50'	4000'	510' x 20'	Yes	East-central	NW ¹ / ₄ SW ¹ / ₄ , Section 15, T. 6 S., R. 22 E
Lookout C Federal #3	300' x 220'	100' x 50'	4300'	135' x 20'	Yes	Southeast	SW ¹ / ₄ NE ¹ / ₄ , Section 10, T. 6 S., R. 22 E
Lookout C Federal #8	300' x 220'	100' x 50'	4300'	645' x 20'	Yes	Northwest	SW ¹ / ₄ NE ¹ / ₄ , Section 9, T. 6 S., R. 22 E
Lookout D Federal #8	300' x 220'	100' x 50'	4300'	225' x 20'	Yes	East-central	SW ¹ / ₄ NE ¹ / ₄ , Section 9, T. 6 S., R. 22 E

2.3 Alternative C – Preferred Action

Modifications or alternatives to the proposed action were identified during follow-up inspections of the proposed well locations. The operator submitted a Sundry Notice on July 15, 2008 for the Lookout C Fed #8 rotating the well pad and reserve pit from the original proposed location to potential impacts to the environment which will result from this action. They also submitted a Sundry Notice on August 15, 2008 shortening the pad, constructing a two-foot containment dike around the pad, and fencing the karst feature for the Lookout D Federal #8.

Alternatives to the proposed action, including relocations, are always considered and applied prior to approval of the APD, including site specific mitigation and/or Conditions of Approval (COAs). The mitigations and COAs are subsequently noted in the appropriate environmental documents. Additionally, mitigation measures are discussed in Sections 4.8 and 4.20. The operator also submitted a sundry notice on August 15, 2008 outlining that they plan to implement the recommended mitigation measures.

2.4 Alternatives Considered But Not Analyzed In Detail

Relocate the Proposed Action:

The well location is determined on the basis of subsurface geologic information. No other alternative location would have significantly fewer impacts than, or have a clear advantage over, the projected location. Therefore, the alternative of changing the location involved in this action is not analyzed further in this EA.

3.0 Description of Affected Environment

This section describes the environment that would be affected by implementation of the alternatives described in Section 2. Aspects of the affected environment described in this section focus on the relevant major resources or issues. Certain critical environmental components require analysis under BLM policy. These items are included below in Table 3.0, found as the first page of this document. Following the table, only the aspects of the affected environment that are potentially impacted are described. The following elements are not present: Areas of Critical Environmental Concern, Prime or Unique Farmlands, Floodplains, Wild and Scenic Rivers, Wilderness or Wilderness Study Areas, Special Status Species, Threatened or Endangered Species, Paleontology, Wastes, Hazardous or Solids, and Wild Horses and Burros.

The proposed wells are located in Chaves County, New Mexico and reasonable foreseeable oil and gas development is described in the 1997 Roswell RMP Record of Decision. The number of proposed wells and their associated infrastructure fall within the reasonable foreseeable development scenario. Additional general information on air quality in these areas is contained in Chapter 3 of the Roswell Draft RMP/Environmental Impact Statement.

In addition to the air quality information in the RMPs cited above, new information about GHGs and their effects on national and global climate conditions has emerged since the RMPs were prepared. On-going scientific research has identified the potential impacts of GHG emissions such as carbon dioxide (CO₂) methane (CH₄); nitrous oxide (NO); water vapor; and several trace gasses on global climate. Through complex interactions on a global scale, GHG emissions cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and burning of fossil carbon sources have caused GHG concentrations to increase measurably, and may contribute to overall climatic changes, typically referred to as global warming.

This EA incorporates an analysis of the contributions of the proposed action to GHG emissions and a general discussion of potential impacts to climate.

3.1 Air Resources

Air quality and climate are the components of air resources, which include applications, activities, and management of the air resource. Therefore, the BLM must consider and analyze the potential effects of BLM and BLM-authorized activities on air resources as part of the

planning and decision making process.

The Environmental Protection Agency (EPA) has the primary responsibility for regulating air quality, including seven nationally regulated ambient air pollutants. Regulation of air quality is also delegated to some states. Air quality is determined by atmospheric pollutants and chemistry, dispersion meteorology and terrain, and also includes applications of noise, smoke management, and visibility. Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. Greenhouse gases (GHGs) and the potential effects of GHG emissions on climate are not regulated by the EPA, however climate has the potential to influence renewable and non-renewable resource management.

3.1.1 Air Quality

The area of the proposed action is considered a Class II air quality area. A Class II area allows moderate amounts air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed soil and exhaust emissions from motorized equipment.

Air quality in the area near proposed well is generally good and is located in any of the areas designated by the Environmental Protection Agency as “non-attainment areas” for any listed pollutants regulated by the Clean Air Act.

Greenhouse gases, including carbon dioxide (CO₂) and methane (CH₄), and the potential effects of GHG emissions on climate, are not regulated by the EPA under the Clean Air Act. However, climate has the potential to influence renewable and non-renewable resource management. The EPA’s Inventory of US Greenhouse Gas Emissions and Sinks found that in 2006, total US GHG emissions were over 6 billion metric tons and that total US GHG emissions have increased by 14.1% from 1990 to 2006. The report also noted that GHG emissions fell by 1.5% from 2005 to 2006. This decrease was, in part, attributed to the increased use of natural gas and other alternatives to burning coal in electric power generation.

The levels of these GHGs are expected to continue increasing. The rate of increase is expected to slow as greater awareness of the potential environmental and economic costs associated with increased levels of GHG's result in behavioral and industrial adaptations.

3.1.2 Climate

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 (Goddard Institute for Space Studies, 2007). However, observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) predicted that by the year 2100, global average surface temperatures would increase 1.4 to 5.8°C (2.5 to 10.4°F) above 1990

levels. The National Academy of Sciences (2006) supports these predictions, but has acknowledged that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

A 2007 US Government Accountability Office (GAO) Report on Climate Change found that, "federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others: 1) physical effects such as droughts, floods, glacial melting, and sea level rise; 2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and 3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses." It is not, however, possible to predict with any certainty regional or site specific effects on climate relative to the proposed lease parcels and subsequent actions.

In New Mexico, a recent study indicated that the mean annual temperatures have exceeded the global averages by nearly 50% since the 1970's (Enquist and Gori). Similar to trends in national data, increases in mean winter temperatures in the southwest have contributed to this rise. When compared to baseline information, periods between 1991 and 2005 show temperature increases in over 95% of the geographical area of New Mexico. Warming is greatest in the northwestern, central, and southwestern parts of the state.

3.2 Cultural Resources

The project falls within the Southeastern New Mexico Archaeological Region. This region contains the following cultural/temporal periods: Paleoindian (ca. 12,000-8,000 B.C.), Archaic (ca. 8000 B.C. –A.D. 950), Ceramic (ca. A.D. 600-1540) Protohistoric and Spanish Colonial (ca. A.D. 1400-1821), and Mexican and American Historical (ca. A.D. 1822 to early 20th century). Sites representing any or all of these periods are known to occur within the region. A more complete discussion can be found in *Living on the Land: 11,000 Years of Human Adaptation in Southeastern New Mexico An Overview of Cultural Resources in the Roswell District*, Bureau of Land Management published in 1989 by the U.S. Department of the Interior, Bureau of Land Management. A cultural resource inventory shall be conducted of the area of effect for the proposed project prior to any ground disturbing activities.

3.3 Native American Religious Concerns

A review of existing information indicates the proposed action is outside any known Traditional Cultural Property.

3.4 Invasive, Non-native Species

There are no known populations of invasive or noxious weed species on the proposed access road and well pad.

Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Noxious weeds cause estimated losses to producers \$2 to \$3 billion annually. These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from noxious weeds; (2) decreased quantity of agricultural products due to noxious weed infestations; and (3) costs to control and/or prevent the noxious weeds.

Further, noxious weeds can negatively affect livestock and dairy producers by making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing producers' feed and animal health care costs. Increased costs to operators are eventually borne by consumers.

Noxious weeds also affect recreational uses, and reduce realty values of both the directly influenced and adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control prevention is not exercised.

3.5 Wildlife

The vegetation found at this site provides habitat to a large range of wildlife species. Some of the common mammals are mule deer, pronghorn, badger, coyote, fox, jackrabbit, cottontails, kangaroo rats, and pocket gophers. It also provides habitat for a variety of grassland and desert birds. Important passerine birds include meadowlarks, horned larks, lark buntings, Cassin's sparrows, lark sparrows, Chihuahuan ravens, and loggerhead shrikes. Other birds include scaled quail, mourning doves, roadrunners, common nighthawks, killdeer, and a variety of raptors including red tailed and Swainson's hawks, northern harriers, great horned owls, and burrowing owls. It also provides habitat to a large variety of common lizards and snakes.

3.6 Threatened or Endangered Species

Under Section 7 of the Endangered Species Act of 1973 (as amended), the BLM is required to consult with the U.S. Fish and Wildlife Service on any proposed action which may affect Federal listed threatened or endangered species or species proposed for listing. RFO reviewed and determined the proposed action is in compliance with listed species management guidelines outlined in Biological Assessments Cons. #2-22-96-F-102, Cons. #22420-2006-I-0144, and Cons. #22420-2007-TA-0033. No further consultation with the Service is required.

3.7 Special Status Species

There are no known special status species in the project area.

In accordance with BLM Manual 6840, BLM manages certain sensitive species not federally listed as threatened or endangered in order to prevent or reduce the need to list them as threatened or endangered in the future. Included in this category are State listed endangered species and Federal candidate species which receive no special protections under the Endangered Species Act

3.8 Wastes, Hazardous or Solid

No waste material will be removed from the project area and upon reclamation of the reserve pit the NMOCD rules will be imposed and the reserve pit contents will be encapsulated.

3.9 General Topography/Surface Geology

The topographic characteristics and/or regional setting are rolling loaming hills with no major land features. No major land features will be disturbed.

3.10 Mineral Resources

Construction material (caliche/gravel) for surfacing the access road and well pad could be obtained by the operator from a federal pit in the SE¼ of Section 09, T. 06 S., R. 22 E., Chaves County, New Mexico. Material can also be obtained from abandoned oil and gas well pads.

3.11 Soil

The *Soil Survey of Chaves County, New Mexico, Northern Part (USDA Soil Conservation Service 1980)* was used to describe and analyze impacts to soils from the proposed action. The soil map units represented in the project area are:

Ector very cobbly loam, 3 to 15 percent slopes (EaC) Permeability of the unit soil is moderate. Runoff of the unit soil is rapid and the hazard of water erosion is high and the hazard of soil blowing is slight.

Hogadero-Pena association, moderately rolling, 1 to 15 percent slopes (HGC) Permeability of the Hogadero soil is slow. Runoff is slow to medium and the hazard of water erosion is slight to moderate and the hazard of soil blowing is moderate. Permeability of the Pena Soil is moderate. Runoff is medium and the hazard of water erosion is moderate and soil blowing is moderate.

3.12 Water Quality

Surface:

Surface water within the area is affected by geology, precipitation, and water erosion. Factors that currently affect surface water resources include livestock grazing management, oil and gas development, recreational use and brush control treatments. No perennial surface water is found on public land in the area. Ephemeral surface water within the area may be located in tributaries, playas, alkali lakes and stock tanks.

Ground:

Groundwater within the area is affected by geology and precipitation. Factors that currently affect groundwater resources in the area include livestock grazing management, oil and gas development, groundwater pumping, and possible impacts from brush control treatments. Most of the groundwater in the area is used for industrial, rural, domestic and livestock purposes.

3.13 Watershed – Hydrology

The watershed and hydrology in the area is affected by land and water use practices. The degree to which hydrologic processes are affected by land and water use depends on location, extent, timing and the type of activity. Factors that currently cause short-lived alterations to the hydrologic regime in the area include livestock grazing management, recreational use activities, groundwater pumping and also oil and gas developments such as well pads, permanent and temporary roads, pipelines and powerlines.

3.14 Vegetation

This lease is within the Grassland Plant Community as identified in the Roswell Resource Management Plan/Environmental Impact Statement (RMP/EIS). Appendix 11 of the Draft RMP/EIS describes the Desired Plant Community (DPC) concept and identifies the components of each community.

The native vegetation is mainly grasses and shrubs. The present vegetation in most areas is mainly hairy grama (*Bouteloua hirsuta*), wolftail (*Lycurus phleoides*), blue grama (*Bouteloua gracilis*) and broom snakeweed (*Gutierrezia sarothrae*). Inter-mixed are also a variety of shrub species including yucca (*Yucca* spp.), javelinabush (*Condalia* spp.), sumac (*Rhus* spp.). Some invaded areas may also contain encroachments of mesquite (*Prosopis glandulosa*). Biological crusts are also a component within this community with gyp inclusions and vegetation comprising of gyp grama (*Bouteloua brevesita*), alkali sacaton (*Sporobolus airoides*) and coldenia (*Coldenia* spp.).

The Ecological Site Description for the proposed well pad and access road on (4-Mile Draw Federal #C8 & #D7) is CP-3 Gravelly (Pecos-Canadian Plains & Valleys).

The Ecological Site Description for the proposed well pad and access road on (Lookout C Federal #3 & #8 and Lookout D Federal #8) is CP-4 Very Shallow (Pecos-Canadian Plains & Valleys).

3.15 Livestock Grazing/Range

The proposed actions, (Lookout C Federal #3 & #8 and Lookout D Federal #8) are located on BLM grazing allotment #64007 Pierce Ranch. Current permitted use is 160 AU's (Animal Units) yearlong @ 73% public land for 1,402 AUM's (Animal Unit Months). Cattle and horses are the class of livestock authorized.

The proposed actions, (4 Mile Draw Federal C#8 & D#7) are located on BLM grazing allotment #64011 Four Mile,. Current permitted use is 303 AU's (Animal Units) yearlong @ 53% public land for 1,927 AUM's (Animal Unit Months). Cattle and horses are the class of livestock authorized.

3.16 Visual Resources

Visual Resource Management (VRM) on public land is conducted in accordance with BLM Handbook 8410 and BLM Manual 8411.

3.17 Recreation

The area around the proposed action site is primarily used by recreational visitors engaged in hunting, caving, sight-seeing, driving for pleasure, off-highway vehicle use, and other recreational activities. Non-recreation visitors include oil and gas industrial workers and ranchers.

3.18 Cave/Karst

The proposed actions are located in the High Karst Occurrence Area.

3.19 Environmental Justice

Executive Order 12898 requires Federal agencies to assess projects to ensure there is no disproportionately high or adverse environmental, health, or safety impacts on minority and low-income populations.

3.20 Public Health and Safety

The project will not be detrimental to the public health. The operator will insure that all phases of the project operations are conducted in workman like manner. Precautionary procedures and/or measures will be strictly adhered to in order provide a safe and sound working environment for the life of the well.

4.0 Environmental Consequences and Proposed Mitigation Measures

Alternative A – No Action

Under the No Action Alternative, the proposed wells would not be drilled. There would be no new impacts from oil and gas production to the resources. The No Action Alternative would result in the continuation of the current land and resource uses in the project area and is used as the baseline for comparison of alternatives.

Alternative B – Proposed Action

Under Alternative B, the Proposed Action, the well would be drilled as originally proposed, without changes to reduce the potential impact to the environment. A summary of potential surface disturbance is presented in Table 4.0.1. Descriptions of potential impacts on individual resources for action alternatives is presented in the following text. Also described are mitigation measures that could be incorporated by the BLM where appropriate as Conditions of Approval attached to the permit.

Alternative C - Preferred Action

A summary of potential surface disturbance is presented in Table 4.0.1. Descriptions of potential impacts on individual resources for action alternatives is presented in the following text. Also described are mitigation measures that could be incorporated by the BLM where appropriate as Conditions of Approval attached to the permit. The changes to the proposed action which resulted in development of Alternative C as the preferred alternative have reduced the potential impact to the environment which will result from this action.

The operator submitted a Sundry Notice on July 15, 2008 for the Lookout C Fed #8 rotating the well pad and reserve pit from the original proposed location to potential impacts to the environment which will result from this action. They also submitted a Sundry Notice on August 15, 2008 shortening the pad, constructing a two-foot containment dike around the pad, and fencing the karst feature for the Lookout D Federal #8.

Table 4.0.1 Summary of Disturbance

Well Name	Well Pad	Access Road	Pipeline	Total Acres
4 Mile Draw Federal C #8	1.52 ac.	0.04 mi	0.01 mi	1.63
4 Mile Draw Federal D #7	1.52 ac.	0.10 mi	0.01 mi	1.76
Lookout C Federal #3	1.52 ac.	0.02 mi	0.01 mi	1.59
Lookout C Federal #8	1.52 ac.	0.12 mi	0.01 mi	1.82
Lookout D Federal #8	1.52 ac.	0.04 mi	0.01 mi	1.63

Well pads, new road construction, and new pipelines are considered long-term impacts, while pipelines within existing disturbance are considered short-term impacts. Short-term impacts are those which can be stabilized or mitigated rapidly (within 5 years) Long-term impacts are those that would substantially remain for more than 5 years.

4.1 Air Resources

4.1.1 Direct and Indirect Effects

Air Quality

Air quality would temporary be directly impacted with pollution from exhaust emissions, chemical odors, and dust that would be caused by the motorized equipment used to construct the access road, well pad, and by the drilling rig that will be used to drill the well. Dust dissemination would discontinue upon completion of the construction phase of the access road and well pad. Air pollution from the motorized equipment would discontinue at the completion of the drilling phase of the operations. The winds that frequent the southeastern part of New Mexico generally disperse the odors and emissions. The impacts to air quality would be greatly reduced as the construction and drilling phases are completed. Other factors that currently affect air quality in the area include dust from livestock herding activities, dust from recreational use, and dust from use of roads for vehicular traffic.

Over the last 10 years, the leasing of Federal oil and gas mineral estate in Roswell Field Office has resulted in an average total of 60 wells drilled on federal leases annually. These wells would contribute a small percentage of the total emissions (including GHG's) from oil and gas activities in New Mexico.

Potential impacts of development could include increased air borne soil particles blown from new well pads or roads, exhaust emissions from drilling equipment, compressors, vehicles, and dehydration and separation facilities, as well as potential releases of GHG and volatile organic compounds during drilling or production activities. The amount of increased emissions cannot be quantified at this time since it is unknown how many wells might be drilled, the types of equipment needed if a well were to be completed successfully (e.g. compressor, separator, dehydrator), or what technologies may be employed by a given company for drilling any new wells. The degree of impact will also vary according to the characteristics of the geologic formations from which production occurs.

The reasonable and foreseeable development scenario developed for the Roswell RMP demonstrated 60 wells would be drilled annually for Federal minerals. Current APD permitting trends within the field office confirm that these assumptions are still accurate. This level of exploration and production would contribute a small incremental increase in overall hydrocarbon emissions, including GHGs, released into the planet's atmosphere. When compared to total national or global emissions, the amount released as a result of potential production from the proposed lease tracts would not have a measurable effect on climate change due to uncertainty and incomplete and unavailable information.

Consumption of oil and gas developed from the proposed well is expected to produce GHGs. Consumption is driven by a variety of complex interacting factors including energy costs, energy efficiency, availability of other energy sources, economics, demography, and weather or climate.

Climate

The assessment of GHG emissions and climate change is in its formative phase. It is currently not feasible to know with certainty the net impacts from the proposed action on climate. The inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate.

4.1.2 Mitigation

The EPA's inventory data breaks down the total US sources of GHG gases by major categories that include "Natural Gas Systems" and "Petroleum Systems." The inventory lists the contributions of natural gas and petroleum systems to total CO₂ and CH₄ emissions (natural gas and petroleum systems do not produce significant amounts of any of the other greenhouse gases). For Natural Gas Systems, the EPA categorizes emissions from distinct stages of the larger category of natural gas systems. These stages include field production, processing, transmission and storage, and distribution. The BLM has regulatory jurisdiction only over field production. Petroleum Systems sub-activities include production field operations, crude oil transportation, and crude oil refining. Within the petroleum systems emission categories, the BLM has authority to regulate production field operations.

The BLM's regulatory jurisdiction over field production of Natural Gas Systems and production field operations of Petroleum Systems has resulted in the development of "Best Management Practices (BMPs)" designed to reduce impacts to air quality by reducing all emissions from field production and operations. The future development of the lease parcels may be subject to appropriate conditions of approval (COAs) to reduce or mitigate GHG emissions. This may occur at the project level through additional analysis. Specific measures developed at the project stage would be incorporated as COAs in the approved APD, and are binding on the operator. Typical measures may include: flare hydrocarbon and gases at high temperatures in order to reduce emissions of incomplete combustion; water dirt roads during periods of high use in order to reduce fugitive dust emissions; require that vapor recovery systems be maintained and functional in areas where petroleum liquids are stored; and re-vegetate areas of the pad not required for production facilities to reduce the amount of dust from the pads.

The EPA data show that improved practices and technology and changing economics have reduced emissions from oil and gas exploration and development (Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006). One of the factors in this improvement is the adoption by industry of the Best Management Practices proposed by the EPA's Natural Gas Energy Star program. The Roswell Field Office will work with industry to facilitate the use of the relevant

BMPs for operations proposed on federal mineral leases where such mitigation is consistent with agency policy.

4.2 Cultural Resources

4.2.1 Direct and Indirect Impacts

There should be no direct or indirect impacts to cultural resources in regard to this undertaking.

4.2.2 Mitigation

To ensure there are no direct or indirect impacts to cultural resources an archaeological survey must be completed prior to any ground disturbing activities. If during the archaeological survey cultural resources are encountered then the proposed undertaking must be moved to avoid the archaeological site or the site may be further mitigated through testing or data recovery.

4.3 Native American Religious Concerns

To date, the area to be affected by project construction has not been identified by interested tribes as being of tribal concern.

4.4 Invasive, Non-native Species

4.4.1 Direct and Indirect Impacts

The construction of an access road and well pad may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seed could be carried to and from the project areas by construction equipment, the drilling rig and transport vehicles. The main mechanism for seed dispersion on the road and well pad is by equipment and vehicles that were previously used and or driven across or through noxious weed infested areas. The potential for the dissemination of invasive and noxious weed seed may be elevated by the use of construction equipment typically contracted out to companies that may be from other geographic areas in the region. Washing and decontaminating the equipment prior to transporting onto and exiting the construction areas would minimize this impact.

Impacts by noxious weeds will be minimized due to requirements for the company to eradicate the weeds upon discovery. Multiple applications may be required to effectively control the identified populations.

4.4.2 Mitigation

In the event noxious weeds are discovered during construction of the access road and well pad, measures will be taken to mitigate those impacts.

4.5 Water Quality:

Surface:

4.5.1A Direct and Indirect Impacts

Surface disturbance from the construction of the well pad, access road, pipelines, and powerlines can result in degradation of surface water quality and groundwater quality from non-point source pollution, increased soil losses, and increased gully erosion.

Potential direct impacts that would occur due to construction of the well pad, access road, pipelines, and powerlines include increased surface water runoff and off-site sedimentation brought about by soil disturbance; increased salt loading and water quality impairment of surface waters; channel morphology changes due to road and pipeline crossings; and possible contamination of surface waters by produced water. The magnitude of these impacts to water resources would depend on the proximity of the disturbance to the drainage channel, slope aspect and gradient, degree and area of soil disturbance, soil character, duration and time within which construction activity would occur, and the timely implementation and success or failure of mitigation measures.

Direct impacts would likely be greatest shortly after the start of construction activities and would likely decrease in time due to natural stabilization, and reclamation efforts. Construction activities would occur over a relatively short period; therefore, the majority of the disturbance would be intense but short lived. Direct impacts to surface water quality would be minor, short-term impacts which may occur during storm flow events. Indirect impacts to water-quality related resources, such as fisheries, would not occur.

Petroleum products and other chemicals, accidentally spilled, could result in surface and groundwater contamination. Similarly, possible leaks from reserve and evaporation pits could degrade surface and ground water quality. Authorization of the proposed projects would require full compliance with BLM directives and stipulations that relate to surface and groundwater protection.

4.5.2A Mitigation

The use of a plastic-lined reserve pit would reduce or eliminate seepage of drilling fluid into the soil and eventually reaching groundwater. Spills or produced fluids (e.g., saltwater, oil, and/or condensate in the event of a breach, overflow, or spill from storage tanks) could result in contamination of the soil onsite, or offsite, and may potentially impact surface and groundwater resources in the long term.

Lookout D Federal #8

A surface drainage feature is located to the east of the Lookout D Federal #8. The pad size will be limited to 100 feet in the east and northeast direction. The edge of the pad will be constructed so that the pad surface will avoid the surface drainage feature. This will require that the surface

disturbance of the pad remain 10 feet or more away from the western edge of the surface drainage feature. This mitigation will protect the integrity of the surface drainage feature.

The original mapped route for the access road for the Lookout D Federal #8 will impact and disturb the surface drainage located to the east. The access road has been relocated and staked to the west of the surface drainage. This mitigation will protect the integrity of the surface drainage feature. All surface disturbing activities will avoid the surface drainage feature located to the east.

A surface drainage feature and a karst feature are located in the east/northeast direction of the Lookout D Federal #8 location. A containment structure or earthen dike shall be constructed and maintained around all sides of the outside boundary of the well pad. The containment structure or earthen dike shall be constructed two (2) feet high (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum). The containment structure or earthen dike is required so that if oilfield waste contaminant or product contaminant were leaked, spilled, and or released upon the well pad the oilfield waste contaminant or product contaminant shall be contained on the well pad and prevented from entering into the surface drainage feature located to the east/northeast and also the karst feature located to the east/northeast. This mitigation will prevent contaminants from entering into the surface drainage feature and the karst feature where contaminants may then enter into surface water and groundwater. The well pad will be constructed into a cut on a slope on the west side of the location where the uphill side of the well pad will not require the construction of the containment structure or earthen dike, but the construction of the containment structure or dike will be required on the North, East, and South sides of the well pad which will extend into the uphill portion of the well pad. The containment structure or earthen dike shall be maintained for the life of the well.

4-Mile Draw Federal C #8

A surface water turnout is located on the west side of County Road 37 which enters into the proposed location of the 4 Mile Draw Federal C #8. The Chaves County Road Department will reconstruct the county road at this location which will divert runoff water to the east side of the county road at this location. Water runoff will no longer flow to the west of the County Road 37 at this location and the water turnout to the west will be removed. This mitigation will prevent water runoff from County Road 37 from entering into the 4 Mile Draw Federal C #8 well location.

B. Groundwater:

4.5.1B Direct and Indirect Impacts

Petroleum products and other chemicals, accidentally leaked through casing, could result in surface and groundwater contamination. Similarly, possible leaks from reserve and evaporation pits could degrade surface and ground water quality

Spills or produced fluids (e.g., saltwater, oil, and/or condensate in the event of a breach, overflow, or spill from storage tanks) could result in contamination of the soil onsite, or offsite, and may potentially impact surface and groundwater resources in the long term.

4.5.2B Mitigation

The casing and cementing requirements imposed on the proposed well would reduce or eliminate the potential for groundwater contamination from drilling mud.

Stock water sources are in the San Andres and Glorieta Formations and the Triassic Redbeds. Fresh water has been found as deep as 470' in section 2, T. 6 S., R. 22 E., approximately 625' in sec. 1, T. 6 S., R. 21 E, and approximately 650' in sec. 14, T. 7 S., R. 22 E. Inquiries to the ranchers in the area with regard to the depth of their water wells found the deepest occurrence to be approximately 725 ft. NMOCD recommends setting surface casing at 800 to 850 ft., however there is no evidence to support this depth. The deepest expected usable water is 725'.

Lookout D Federal #8

A surface drainage feature and a karst feature are located in the east/northeast direction of the Lookout D Federal #8 location. A containment structure or earthen dike shall be constructed and maintained around all sides of the outside boundary of the well pad. The containment structure or earthen dike shall be constructed two (2) feet high (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum). The containment structure or earthen dike is required so that if oilfield waste contaminant or product contaminant were leaked, spilled, and or released upon the well pad the oilfield waste contaminant or product contaminant shall be contained on the well pad and prevented from entering into the surface drainage feature located to the east/northeast and also the karst feature located to the east/northeast. This mitigation will prevent contaminants from entering into the surface drainage feature and the karst feature where contaminants may then enter into surface water and groundwater. The well pad will be constructed into a cut on a slope on the west side of the location where the uphill side of the well pad will not require the construction of the containment structure or earthen dike, but the construction of the containment structure or dike will be required on the North, East, and South sides of the well pad which will extend into the uphill portion of the well pad. The containment structure or earthen dike shall be maintained for the life of the well.

4.6 General Topography/Surface Geology

The surface disturbance anticipated from the construction of the well pad and access road would have minimal impacts on the area of the operations. No major land or soil displacement would occur from the cradle to grave operations associated with drilling the well.

4.6.1 Direct and Indirect Impacts

Direct impacts would result from the removal of the surface soils during construction of the well pad and access road. The consequential earth moving activities would indirectly impact the

vegetation and would cause the fragmentation of the surface habitat where small animals live in the project area.

4.6.2 Mitigation

The inclusion of mitigation measures to conserve the landscape as much as possible in the Conditions of Approval would lessen the impacts from the surface disturbance activities on this project.

4.7 Soil

4.7.1 Direct and Indirect Impacts

The construction of the access roads, well pads, and pipeline corridors would disturb about 8.43 lateral acres of topsoil and would expose the substratum soil (see Table 4.0.1). Direct impacts resulting from the oil and gas construction of the well pad, access road, and reserve pit include removal of vegetation, exposure of the soil, mixing of horizons, compaction, loss of top soil productivity and susceptibility to wind and water erosion. Wind erosion would be expected to be a minor contributor to soil erosion with the possible exception of dust from vehicle traffic. These impacts could result in increased indirect impacts such as runoff, erosion and off-site sedimentation. Activities that could cause these types of indirect impacts include construction and operation of well sites, access roads, gas pipelines and facilities.

Contamination of soil from drilling and production wastes mixed into soil or spilled on the soil surfaces could cause a long-term reduction in site productivity. Some of these direct impacts can be reduced or avoided through proper design, construction and maintenance and implementation of best management practices.

Additional soil impacts associated with lease development would occur when heavy precipitation causes water erosion damage. When water saturated segment(s) on the access road become impassable, vehicles may still be driven over the road. Consequently, deep tire ruts would develop. Where impassable segments are created from deep rutting, unauthorized driving may occur outside the designated route of the access road.

4.7.2 Mitigation

The operator shall stockpile the topsoil from the surface of the well pad which will be used for surface reclamation of the well pad. The impact to the soil would be remedied upon reclamation of the well pad when the stockpiled soil that was specifically conserved to establish a seed bed is spread over the well pad and vegetation re-establishes.

The reserve pit shall be re-contoured and reseeded as described in the attached Conditions of Approval. Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation/restoration of the disturbed areas as described in the attached Conditions of Approval.

Road constructions requirements and regular maintenance would alleviate potential impacts to the access road from water erosion damage.

4.8 Watershed - Hydrology

4.8.1 Direct and Indirect Impacts

Construction and surface disturbance activities from the construction of the well pad, access road, pipelines, and powerlines can result in long term and short term alterations to the hydrologic regime. Peak flow and low flow of perennial streams, ephemeral, and intermittent rivers and streams would be directly affected by an increase in impervious surfaces resulting from the construction of the well pad and road. The potential hydrologic effects to peak flow is reduced infiltration where surface flows can move more quickly to perennial or ephemeral rivers and streams, causing peak flow to occur earlier and to be larger. Increased magnitude and volume of peak flow can cause bank erosion, channel widening, downward incision, and disconnection from the floodplain. The potential hydrologic effects to low flow is reduced surface storage and groundwater recharge, resulting in reduced baseflow to perennial, ephemeral, and intermittent rivers and streams. The direct impact would be that hydrologic processes may be altered where the perennial, ephemeral, and intermittent river and stream system responds by changing physical parameters, such as channel configuration. These changes may in turn impact chemical parameters and ultimately the aquatic ecosystem.

Long term direct and indirect impacts to the watershed and hydrology would continue for the life of the well and would decrease once all well pad and road surfacing material has been removed and reclamation of the well pad, access road, pipelines, and powerlines has taken place. Short term direct and indirect impacts to the watershed and hydrology from access roads that are not surfaced with material would occur and would likely decrease in time due to reclamation efforts.

4.8.2 Mitigation

The operator shall stockpile the topsoil from the surface of the well pad which will be used for surface reclamation of the well pad. The reserve pit shall be re-contoured and reseeded as described in the attached Conditions of Approval. Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation/restoration of the disturbed areas as described in the attached Conditions of Approval.

4.9 Vegetation

4.9.1 Direct and Indirect Impacts

The construction of the access roads, well pads, and pipeline corridors would disturb about 8.43 acres of native vegetation (see Table 4.0.1). If it is a producing well, reclamation would not commence until the well is a depleted producer and plugged and abandoned. Vegetative recovery on the access road and well pad would depend on life of the well. Native vegetation would encroach on the well pad over time with only high traffic areas remaining un-vegetated.

If drilled as a dry hole and plugged, reclamation of the access road and well pad would immediately follow. Vegetative impacts would be short-term when the access road and well pad re-vegetate within a few years, and reclamation of the access road and well pad are successful.

4.9.2 Mitigation

No impact to vegetation is anticipated. However measures will be taken in the event impacts to vegetation are found.

4.10 Livestock Grazing/Range

4.10.1 Direct and Indirect Impacts

There would be some minor disruption of livestock grazing in the pasture, specifically on the well pad, during the construction and drilling phase of the well. Vehicle traffic would increase in the area, which may lead to conflicts with livestock.

4.10.2 Mitigation

If any conflicts with livestock do arise as a result of the access road and well pad construction, mitigation measures will be taken, and consultation with the allottee will mitigate those impacts.

4.11 Wildlife

4.11.1 Direct and Indirect Impacts

Some small wildlife species may be killed and their dens or nests destroyed during construction of the access road and well pad. The construction of the access road and well pad could cause fragmentation of wildlife habitat. The short-term negative impact to wildlife would occur during the construction phase of the operations would be due to noise and habitat destruction. In general, most wildlife species would become habituated to the new facilities. For other wildlife species with a low tolerance to activities, the operations on the well pad would continue to displace wildlife from the area due to disturbances by the high volumes of vehicle traffic during equipment maintenance. Upon abandonment of the well, the area would re-vegetate and wildlife would return to previous levels.

4.11.2 Mitigation

The conditions of approval would alleviate most losses of wildlife species, such as; netting storage tanks, installation or other modifications of cones on separator stacks, and timing stipulations

4.12 Recreation

Oil and gas activities would have little or no affect on recreational opportunities within this area. Large blocks of public land would allow recreationist to use public land and avoid the oil and gas facilities within the area.

4.12.1 Direct and Indirect Impacts

None

4.12.2 Mitigation

None

4.13 Visual Resources

The objective of Class IV is to: “Provide for management activities which require major modification of the existing landscape character...Every attempt, however, should be made to reduce or eliminate activity impacts through careful location, minimal disturbance, and repeating the basic landscape elements.”

Through color manipulation, by painting well facilities to blend with the rolling to flat vegetative and/or landform setting with a gray-green to brownish color, the view is expected to favorably blend with the form, line, color and texture of the existing landscape. The semi-gloss color Juniper Green from the standard environmental colors (June 2008) closely approximates the brownish color of the setting. All facilities, including the meter building, would be painted this color.

Cumulative adverse visual impacts can be avoided by gradually moving into a more appropriate vegetative/landform setting color scheme.

4. 13.1 Direct and Indirect Impacts

Through color manipulation, by painting well facilities to blend with the rolling to flat vegetative and/or landform setting with a gray-green to brownish color, the view is expected to favorably blend with the form, line, color and texture of the existing landscape

4.13.2 Mitigation

The semi-gloss color Juniper Green from the Standard Environmental Colors Chart (June 2008) is to be used on all facilities to closely approximates the vegetation within the setting. All facilities, including the meter building, would be painted this color.

4.14 Cave/Karst

The proposed action is located in the *High Karst Occurrence Area*, and the potential of adverse impact to known cave entrances or karst features is present within the project area.

4.14.1 Direct and Indirect Impacts

Lookout D Federal 8: Impacts would be likely to occur to a significant subsidence Karst Air Hole feature due to oil pad traffic both human and vehicles. During drilling an underground void may be encountered.

4.14.2 Mitigation

Lookout D Federal 8: Subsidence and Karst Air Hole. Fence the area around the Air Hole with a 30' by 30' woven wire fence 4' high. This would effectively provide a buffer around the Air Hole to protect it. Drilling: Should the oil company encounter a significant void during drill operations, the drilling company would suspend drilling and notify the Bureau of Land Management Roswell Field Office Outdoor Recreation Planner for further mitigation.

4.15 Public Health and Safety

4.15.1 Direct and Indirect Impacts

The construction and drilling operations will be conducted in a safe workman like manner and no impacts are anticipated to occur when the operations are conducted in a professional constructive manner.

Precautionary measures shall be taken by the operator during construction of the access road to protect any existing pipeline(s) that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over each of the existing pipeline(s). The operator shall be held responsible for any damage to the existing pipeline(s). If the either pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline(s). The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

4.15.2 Mitigation

non-required

4.16 Environmental Justice

4.16.1 Direct and Indirect Impacts

No minority or low income populations would be directly affected in the vicinity of the proposed action. Indirect impacts could include impacts due to overall employment opportunities related to the oil and gas and service support industry in the region, as well as the economic benefits to State and County governments related to royalty payments and severance taxes. Other impacts could include a small increase in activity and noise disturbance in areas used for grazing, wood gathering or hunting. However, these impacts would apply to all public land users in the project area.

4.4.2 Mitigation

None

4.28 Cumulative Impacts

The leased area of the proposed action has been industrialized with oil and gas well development. The surface disturbance for each project that has been permitted has created a spreading out of land use fragmentation. The cumulative impacts fluctuate with the gradual reclamation of well abandonments and the creation of new additional surface disturbances in the construction of new access roads and well pads. The on-going process of restoration of abandonments and creating new disturbances for drilling new wells gradually accumulates as the minerals are extracted from the land. Preserving as much land as possible and applying appropriate mitigation measures will alleviate the cumulative impacts.

Due to the absence of regulatory requirements to measure GHG emissions and the variability of oil and gas activities on federal minerals, it is not possible to accurately quantify potential GHG emissions in the affected areas as a result of making the proposed tracts available for leasing. Some general assumptions however can be made: leasing the proposed tracts may contribute to drilling new wells.

The New Mexico Greenhouse Gas Inventory and Reference Case Projection 1990-2020 (Inventory) estimates that approximately 17.3 million metric tons of natural gas and 2.3 million metric tons of natural gas emissions are projected by 2010 as a result of oil and natural gas production, processing, transmission and distribution. As of 2008, there were 23,196 oil wells and 27,778 gas wells in New Mexico.

There are approximately 4,500 existing oil and gas wells in the Roswell Field Office, which account for approximately 9 percent of the total wells in New Mexico. Therefore, GHG emissions from all wells within the field office amount to approximately 1.764 metric tons annually ($19.6 \text{ mmt} \times 0.09 = 1.764 \text{ mmt}$). Federal oil and gas wells amount to approximately 40 percent of the wells within the field office (see Appendix 7 of the 2006 Draft Special Status Species RMP Amendment.). Annual GHG emissions from federal oil and gas wells are approximately 0.71 metric tons ($1.763 \text{ mmt} \times 0.4 = 0.71 \text{ mmt}$).

These totals, when compared to the estimates used for the cumulative analysis previously referenced, show that wells drilled on federal leases wells may be expected to produce approximately 3.6 percent of the GHG emissions produced from wells drilled in New Mexico. This amount of GHG emissions represents a small, incremental contribution to the total emissions and is also insignificant when compared to global GHG emission levels. This small incremental contribution to global GHG gases cannot be translated into incremental effects on climate change globally or in the area of these site-specific actions. As oil and gas and natural gas production technology continues to improve in the future, one assumption is that it may be feasible to further reduce GHG emissions.

The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts. However, potential impacts to natural resources and plant and animal species due to climate change are likely to be varied, including those in the southwestern United States. For example, if global climate change results in a warmer and drier climate, increased particulate matter impacts could occur due to increased windblown dust from drier and less stable soils. Cool season plant species' spatial ranges are predicted to move north and to higher elevations, and extinction of endemic threatened/endangered plants may be accelerated.

Due to loss of habitat or competition from other species whose ranges may shift northward, the population of some animal species may be reduced or increased. Less snow at lower elevations would likely impact the timing and quantity of snowmelt, which, in turn, could impact water resources and species dependant on historic water conditions. Forests at higher elevations in New Mexico, for example, have been exposed to warmer and drier conditions over a ten year period. Should the trend continue, the habitats and identified drought sensitive species in these forested areas and higher elevations may also be more affected by climate change.

While it is likely that there will be no significant cumulative impact from the proposed actions, continued oil and gas development, and other surface-disturbing activities in these areas, may potentially have negative cumulative impacts on vegetation, soil, water, livestock, wildlife and visual resources.

4.28.1 Residual Impacts

Direct impacts to the local environment detailed above remain throughout the life of the proposed operation, however, these impacts would be substantially reduced by mitigation measures.

4.28.2 Mitigation Measures

Mitigation measures have been identified and have been incorporated into stipulations and are made part of the permit. These measures include but are not limited to dust control, noxious weed control, road construction, maintenance and termination.

5.0 Consultation/Coordination

This section includes individuals or organizations from the public and its' users, the interdisciplinary team, and permittees that were contacted during the development of this document.

Table 5.1 Summary of Public Contacts Made During Preparation of Document and Interdisciplinary Team

Public Contact	Title	Organization	Present at Onsite?
James L. Schultz	Regulatory Agent	McKay Oil	Present
Terry Allensworth	Chaves County Road Operations Director	Chaves County Road Department	Secondary Inspection
Jim Hickman	Chaves County Road Foreman	Chaves County Road Department	Secondary Inspection
ID Team Member	Title	Organization	Present at Onsite?
Richard G. Hill	Environmental Protection Specialist	RFO	Present
Michael McGee	Hydrologist/Geologist	RFO	Secondary Inspection
Brian Novosak	Natural Resource Spec.	RFO	Present
Bill Murry	Outdoor Recreation Planner	RFO	Secondary Inspection
Erin Boyle	Geographer/Gis Specialist	RFO	Secondary Inspection
Mary Martinez	Geographer/Gis Specialist Student	RFO	Secondary Inspection

6.0 Appendices

The Roswell Field Office; Conditions of Approval (Exhibit A), Buried Pipeline Stipulations (Exhibit B), Well Location Map (Exhibit C), and the special requirements derived from this EA, would be applied to this proposed action to minimize the surface disturbance and conserve the surrounding landscape.

6.1.0 References

EPA Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006. Environmental Protection Agency, Washington, D.C.

EPA, Natural Gas Star Program (2006 data) at: <http://www.epa.gov/gasstar/accomplish.htm>. Environmental Protection Agency, Washington, D.C.

Enquist, Carolyn and Gori, Dave. Implications of Recent Climate Change on Conservation Priorities in New Mexico. April 2008.

Goddard Institute for Space Studies. 2007. Annual Mean Temperature Change for Three Latitude Bands. Datasets and Images. GISS Surface Temperature Analysis, Analysis Graphs and Plots. New York, New York. (Available on the Internet: <http://data.giss.nasa.gov/gistemp/graphs/Fig.B.lrg.gif>.)

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Basis (Summary for Policymakers). Cambridge University Press. Cambridge, England and New York, New York. (Available on the Internet: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>)

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National Academy of Sciences. 2006. Understanding and Responding to Climate Change: Highlights of National Academies Reports. Division on Earth and Life Studies. National Academy of Sciences. Washington, D.C. (Available on the Internet: <http://dels.nas.edu/basc/Climate-HIGH.pdf>.)

US Government Accountability Office Report "Climate Change, Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources" GAO-07-863, August 2007 (1st paragraph, 1st page, GAO Highlights) at: <http://www.gao.gov/news.items/d07863.pdf>.

U.S. Department of the Interior, Bureau of Land Management. 1997. Roswell Proposed Resource Management Plan and Final Environmental Impact Statement. Roswell, New Mexico.

U.S. Department of the Interior, Bureau of Land Management. 1997. Roswell Approved Resource Management and Plan Record of Decision. Roswell, New Mexico.

U.S. Department of the Interior, Bureau of Land Management. 2008. Special Status Species Resource Management Plan Amendment and Record of Decision. Roswell, New Mexico.

6.1.1 APD - Complete

6.1.2 Authorities

Code of Federal Regulations (CFR)

40 CFR All Parts and Sections inclusive Protection of Environment, Revised as of July 1, 2001.

43 CFR, All Parts and Sections inclusive - Public Lands: Interior. Revised as of October 1, 2000.

U.S. Department of the Interior, Bureau of Land Management and Office of the Solicitor (editors). 2001. The Federal Land Policy and Management Act, as amended. Public Law 94-579.

6.1.3 Other Supporting Information

Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 W. Second Street
Roswell, New Mexico 88201

Project: Lookout C Federal #3 Gas Well
Location: Section: Unit L, Sec. 10, T06S-R22E
Applicant: McKay Oil Corporation
Roswell Field Office: (575) 627-0272

EA Log Number: NM-510-2008-110
Archaeological Report: 08-R-092A
Lease Number: NM-036192
File Code: 3160

Project: Lookout C Federal #8 Gas Well
Location: Section: Unit H, Sec. 9, T06S-R22E
Applicant: McKay Oil Corporation
Roswell Field Office: (575) 627-0272

EA Log Number: NM-510-2008-110
Archaeological Report: 08-R-089-A
Lease Number: NM-036192
File Code: 3160

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined the proposed action is not expected to have significant impacts on the environment and that preparation of an Environmental Impact Statement is not warranted.

Cultural resource inventories were conducted for the area of effect (08-R-089-A and 08-R-092A), no Historic Properties were identified. No cultural resources will be affected.

Decision Record

It is my decision to authorize the Applications for Permit to Drill or Deepen (APD), for the following 2 gas wells, submitted by McKay Oil Corporation using Alternative C – Preferred Alternative for the Lookout C Federal #8 and Alternative B – Proposed Action for Lookout C Federal #3. The provisions for the approval of the APDs will include the attachment of the Roswell Field Office requirements defined in the following exhibits: Exhibit A – Conditions of Approval; Exhibit B: Surface Pipeline Stipulations; and Exhibit C: Map. Additionally, the on-lease tie-in pipelines to the wells are also approved.

Rationale: The Bureau of Land Management staff has reviewed the environmental assessment and identified site-specific mitigation measures to avoid or minimize surface impacts resulting from the construction of this project. The well pad and access road and pipeline will remain as long term impacts. The cumulative impacts to the environment from existing and new development have been identified.

The Bureau of Land Management's approval of the APDs does not relieve the lessee and operator from obtaining required authorizations from the private surface owner.

The proposed action is in conformance with the 1997 Roswell Resource Management Plan 1997, as amended, and conforms to the land-use planning terms and conditions required under 43 CFR 1610.5. This action does not conflict with existing Chaves County land-use planning or zoning.

Administrative Review and Appeal: Under BLM regulations, this Decision Record (DR) is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this DR must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, 1474 Rodeo Road, Santa Fe, NM 87505, no later than 20 business days after this DR is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Prepared by:

/s/ Brian A. Novosak

08/26/2008

Date

Brian A. Novosak
Natural Resource Specialist

Approved by:

/s/ Brian A. Novosak

08/27/2008

Date

Angel Mayes,
Assistant Field Manager,
Lands and Minerals

**EXHIBIT A
PECOS DISTRICT
ROSWELL FIELD OFFICE
CONDITIONS OF APPROVAL**

08/27/2008

Lookout C Federal #3
2310' FSL & 330' FWL, Unit L, Sec. 10 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36193

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or Paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or Paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL:

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped to approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and shall be used for interim and final reclamation of the well pad. The topsoil shall be stockpiled in the farthest side of the well pad away from the reserve pit.

C. RESERVE PITS:

The reserve pit shall be constructed and closed in accordance with current NMOCD rules.

The reserve pit shall be constructed 100' x 50' on the west side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of four feet below ground level. Should the pit content level not meet the four foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of four feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

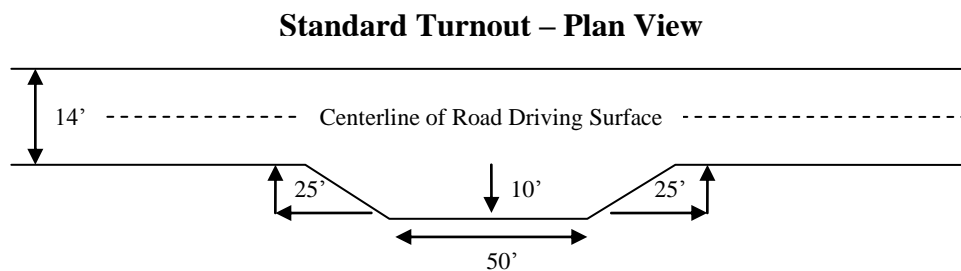
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

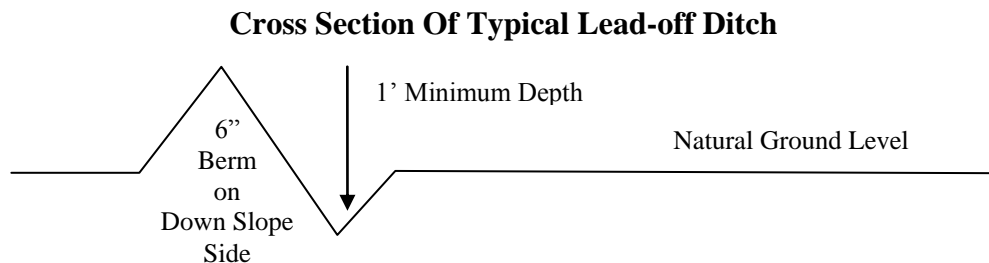
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

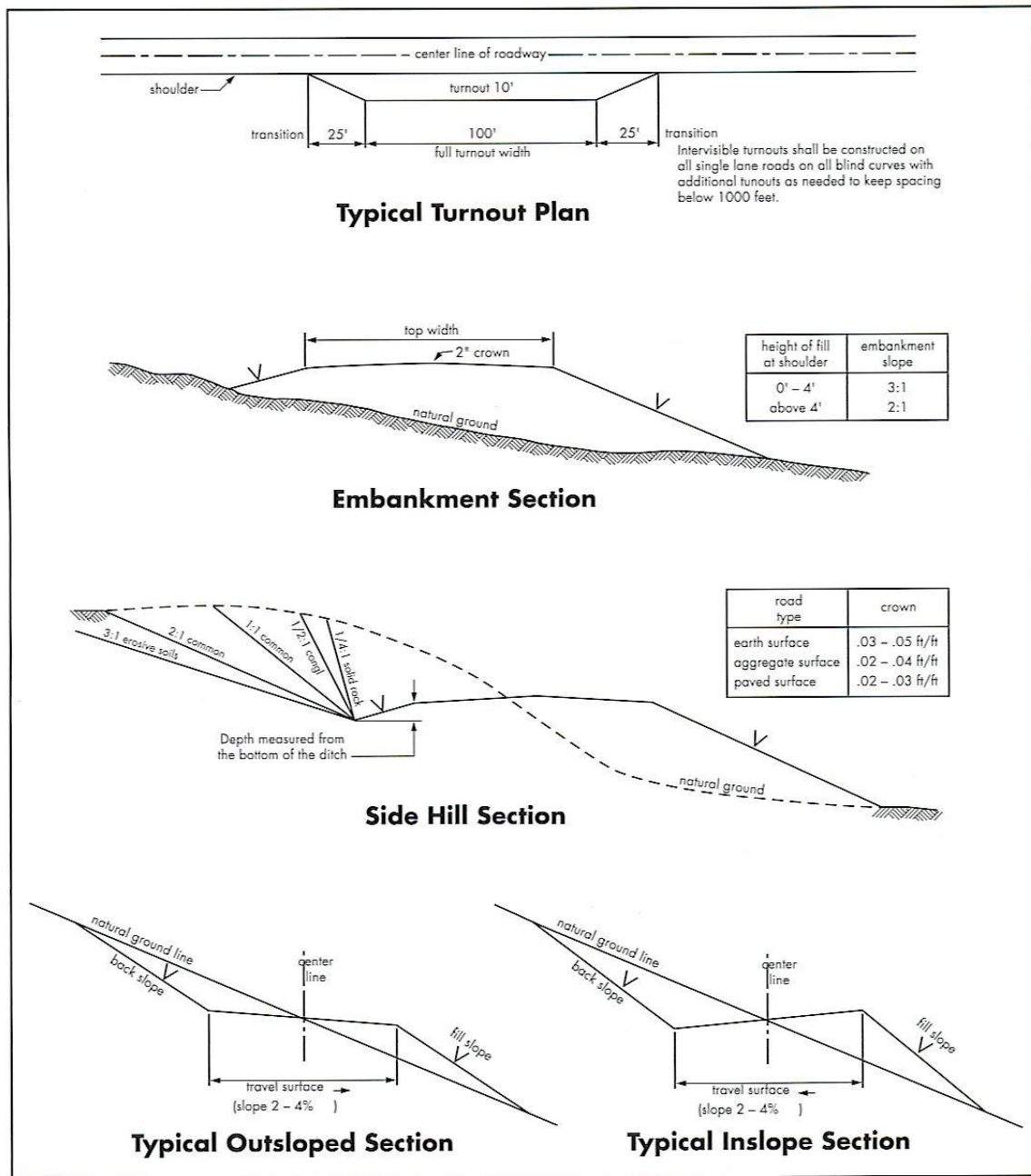
Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Pipeline Protection Requirement

Precautionary measures shall be taken by the operator during construction of the access road to protect any existing pipeline(s) that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over each of the existing pipeline(s). The operator shall be held responsible for any damage to the existing pipeline(s). If the either pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline(s). The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

Figure 1 – Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.

2. The Roswell Field Office is to be notified a minimum of 24 hours in advance for a representative to witness:

a. Spudding

b. Cementing casing: **8-5/8 inch 5-1/2 inch**

The Roswell Field Office is to be notified a minimum of 4 hours in advance for a representative to witness

BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

B. CASING:

1. The **8-5/8 inch** surface casing shall be set **at approximately 950 feet** and cemented to the surface.

a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **5-1/2 inch** production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone**. If cement does not

circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing. In a Sundry Notice submitted August 20, 2008, the operator is proposing a casing program of mixed pipe run for 8 5/8" surface casing J55-24#, J55-32#, K55-24#, and K55-32#.

C. PRESSURE CONTROL:

1. Before drilling below the **8-5/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.

2. Before drilling below the **8-5/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

3. The BOPE shall be installed before drilling below the **8-5/8** inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

b. The tests shall be done by an independent service company.

c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.

e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.

f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

VI. PRODUCTION

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a semi-gloss non-reflective paint color, Juniper Green, Standard Environmental Colors (June 2008).

VRM Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer.

The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo “interim” reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of re-vegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing re-vegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be re-vegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

Upon closure of the reserve pit, all of the gypsum rock material that is excavated and removed from the reserve pit during reserve pit construction shall be placed back into the reserve pit below ground level.

The reserve pit, when dried and closed, shall be re-contoured, all trash removed, and reseeded as follows:

The following soil or soil associations may represent these ecological sites:

Shallow SD-3 Ecological Site
Very Shallow, CP-4 Ecological Site

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Blue grama	<i>(Bouteloua gracilis)</i>	3.00
Or Black grama	<i>(B. eriopoda)</i>	
Sideoats grama	<i>(Bouteloua curtipendula)</i>	2.00
New Mexico Feathergrass	<i>(Stipa neomexicana)</i>	1.00
Or Green sprangletop	<i>(Leptochloa dubia)</i>	
Desert or Scarlet	<i>(Sphaeralcea ambigua</i>	1.00
Globemallow	<i>or S. coccinea)</i>	
Croton	<i>(Croton spp.)</i>	1.00
Buckwheat	<i>(Eriogonum spp.)</i>	<u>1.00</u>
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		9.00
Certified Weed Free Seed		

If one species is not available

Increase ALL other proportionately

Use no less than four (4) species, including one (1) forb.

No less than 9 pounds pls per acre shall be applied.

APPROVED: /s/ Douglas J. Burger

District Manager, Pecos District

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.

b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

c. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.

**EXHIBIT B
ROSWELL FIELD OFFICE
PECOS DISTRICT
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

08/27/2008

Lookout C Federal #3
2310' FSL & 330' FWL, Unit L, Sec. 10 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36193

A. THE APD AND/OR THE SUNDRY NOTICE WAS USED FOR THE ON-LEASE SURFACE PIPELINE CONSTRUCTION.

1. The APD and/or Sundry Notice And Report On Wells can act, to the extent possible, as an application for the on-lease construction of the surface pipeline on Federal surface lands. In combination with the approved APD, the following standard terms and conditions are hereby attached to the APD/SN on-lease authorization.

B. The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The BLM shall administer compliance and monitor construction of the pipeline. Notify the Roswell Field Office of Surface Protection at least 3 working days prior to commencing construction of the pipeline at (575) 627-0247.

2. PIPELINE CONSTRUCTION:

A.) The on-lease pipeline (100 feet) shall be laid on the surface within a maximum disturbance width of 10 feet from the outer edge of the road and buried on the well pads 36 inches.

B.) The 2 inch steel pipeline shall parallel the new access road on the west side of the road.

C.) The on-lease pipeline centerline shall be constructed 25 feet from the centerline of all existing access roads.

D.) The holder shall bury the pipeline in a trench 46 inches deep under all existing access roads.

E.) All operations shall be contained within the perimeters of the archaeological cleared areas.

3. All maintenance activity shall be confined within the authorized pipeline corridor width of 15 feet.

4. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

5. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain.

6. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under the Sundry Notice approval for construction of a surface pipeline.

7. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this approval. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

8. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the pipeline corridor (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline corridor), or resulting from other activities of the holder on the pipeline corridor. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

9. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipeline rupture, fire, or spills caused or substantially aggravated by any of the following within the pipeline corridor or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.

- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

- a. The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.
- b. This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

10. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any gas, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal land, the control and total removal, disposal, and cleaning up of such gas, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages resulting therefrom, on the Federal land, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

11. The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

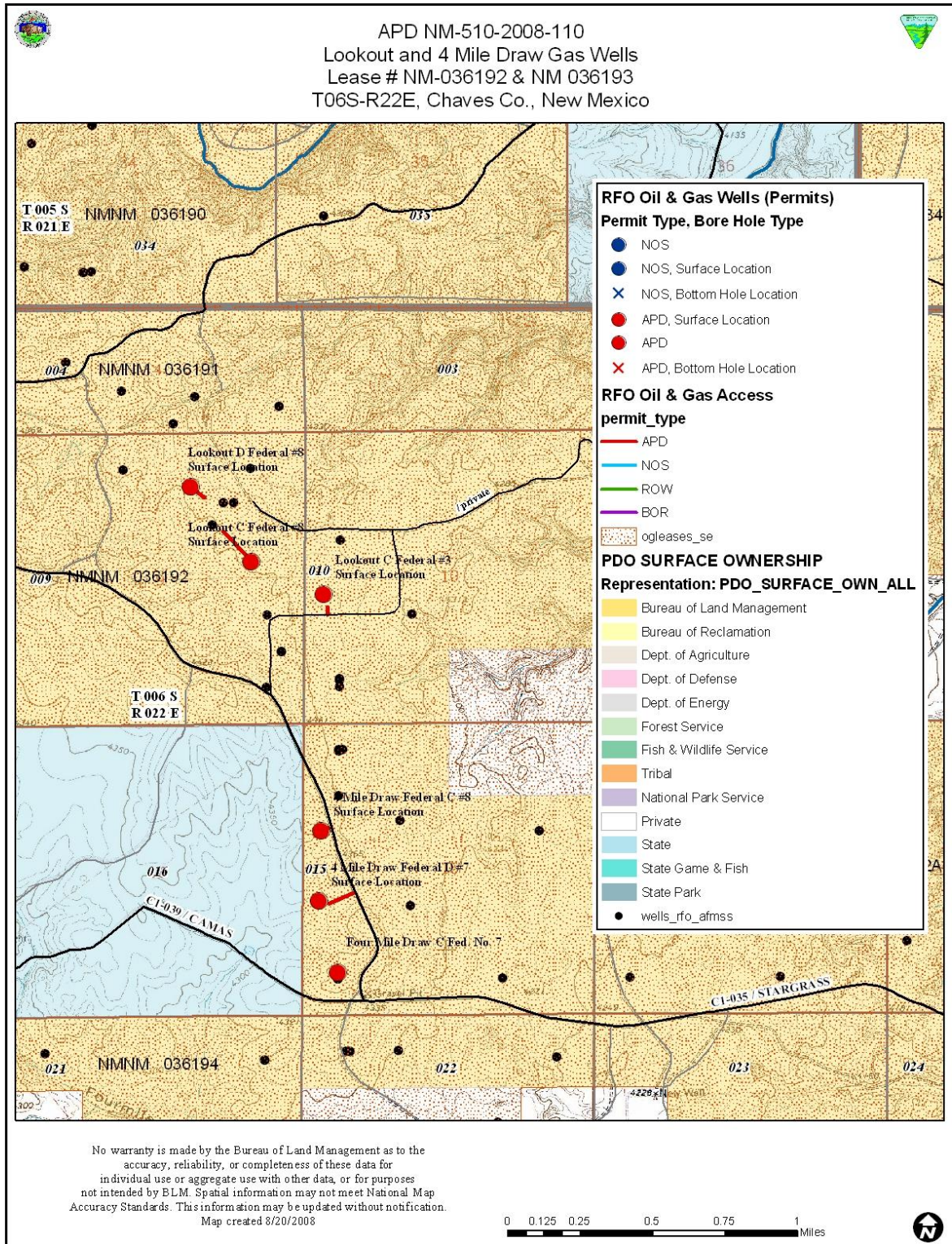
12. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for those being encountered and which are in accordance with sound resource management practices.

13. Excluding the pipe, all above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be Juniper Green, Standard Environmental Colors (June 2008).

14. The pipeline will be identified by signs at the point of origin and completion of the pipeline and at all road crossings. At a minimum, signs will state the holder's name, BLM leaser number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

Exhibit C Map



**EXHIBIT A
PECOS DISTRICT
ROSWELL FIELD OFFICE
CONDITIONS OF APPROVAL**

08/27/2008

Lookout C Federal #8
2310' FNL & 990' FEL, Unit H, Sec. 9 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36193

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or Paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or Paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL:

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped to approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and shall be used for interim and final reclamation of the well pad. The topsoil shall be stockpiled in the farthest side of the well pad away from the reserve pit.

C. RESERVE PITS:

The reserve pit shall be constructed and closed in accordance with current NMOCD rules.

The reserve pit shall be constructed 60' x 40' on the southwest side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of four feet below ground level. Should the pit content level not meet the four foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of four feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

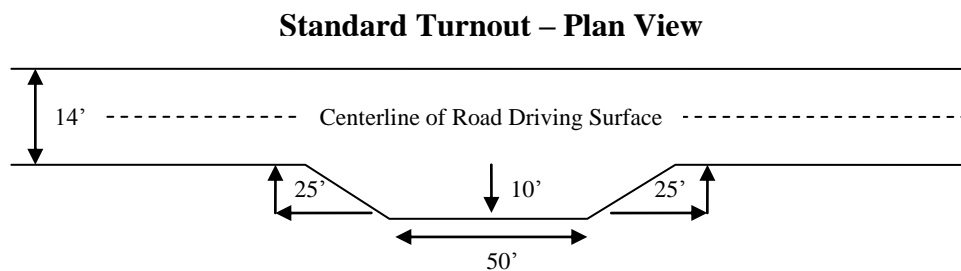
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

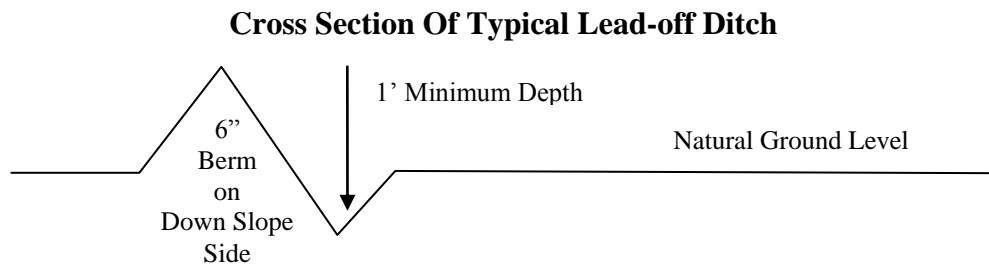
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

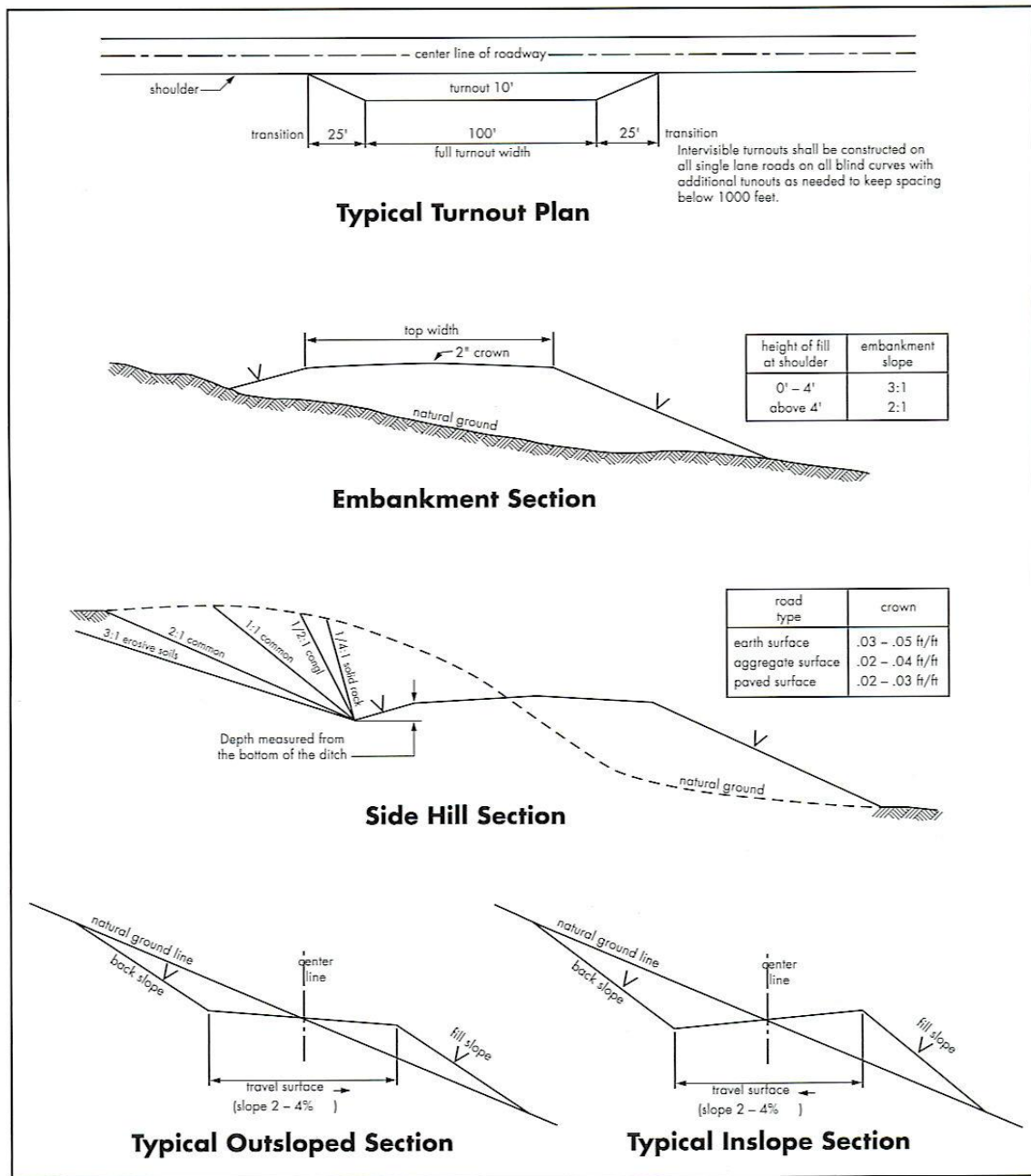
Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Pipeline Protection Requirement

Precautionary measures shall be taken by the operator during construction of the access road to protect any existing pipeline(s) that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over each of the existing pipeline(s). The operator shall be held responsible for any damage to the existing pipeline(s). If the either pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline(s). The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

Figure 1 – Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.

2. The Roswell Field Office is to be notified a minimum of 24 hours in advance for a representative to witness:

a. Spudding

b. Cementing casing: **8-5/8 inch 5-1/2 inch**

The Roswell Field Office is to be notified a minimum of 4 hours in advance for a representative to witness

BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

B. CASING:

1. The **8-5/8 inch** surface casing shall be set **at approximately 950 feet** and cemented to the surface.

a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **5-1/2** inch production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone**. If cement does not circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

C. PRESSURE CONTROL:

1. Before drilling below the **8-5/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.
2. Before drilling below the **8-5/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.
3. The BOPE shall be installed before drilling below the **8-5/8** inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
 - a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - b. The tests shall be done by an independent service company.
 - c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 - d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.
 - e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
 - f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

VI. PRODUCTION

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a semi-gloss non-reflective paint color, Juniper Green, Standard Environmental Colors (June 2008).

VRM Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer.

The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo “interim” reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

Upon closure of the reserve pit, all of the gypsum rock material that is excavated and removed from the reserve pit during reserve pit construction shall be placed back into the reserve pit below ground level.

The reserve pit, when dried and closed, shall be re-contoured, all trash removed, and reseeded as follows:

The following soil or soil associations may represent these ecological sites:

Shallow SD-3 Ecological Site
Very Shallow, CP-4 Ecological Site

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Blue grama	(<i>Bouteloua gracilis</i>)	3.00
Or Black grama	(<i>B. eriopoda</i>)	
Sideoats grama	(<i>Bouteloua curtipendula</i>)	2.00
New Mexico Feathergrass	(<i>Stipa neomexicana</i>)	1.00
Or Green sprangletop	(<i>Leptochloa dubia</i>)	
Desert or Scarlet	(<i>Sphaeralcea ambigua</i>	1.00
Globemallow	or <i>S. coccinea</i>)	
Croton	(<i>Croton</i> spp.)	1.00
Buckwheat	(<i>Eriogonum</i> spp.)	<u>1.00</u>
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		9.00
Certified Weed Free Seed		

If one species is not available

Increase ALL other proportionately

Use no less than four (4) species, including one (1) forb.

No less than 9 pounds pls per acre shall be applied.

APPROVED: /s/ Douglas J. Burger

District Manager, Pecos District

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.

b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

c. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.

**EXHIBIT B
ROSWELL FIELD OFFICE
PECOS DISTRICT
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

08/27/2008

Lookout C Federal #8
2310' FNL & 990' FEL, Unit H, Sec. 9 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36193

A. THE APD AND/OR THE SUNDRY NOTICE WAS USED FOR THE ON-LEASE SURFACE PIPELINE CONSTRUCTION.

1. The APD and/or Sundry Notice And Report On Wells can act, to the extent possible, as an application for the on-lease construction of the surface pipeline on Federal surface lands. In combination with the approved APD, the following standard terms and conditions are hereby attached to the APD/SN on-lease authorization.

B. The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The BLM shall administer compliance and monitor construction of the pipeline. Notify the Roswell Field Office of Surface Protection at least 3 working days prior to commencing construction of the pipeline at (575) 627-0247.

2. PIPELINE CONSTRUCTION:

A.) The on-lease pipeline (642 feet) shall be laid on the surface within a maximum disturbance width of 10 feet from the outer edge of the road and buried on the well pads 36 inches.

B.) The 2 inch steel pipeline shall parallel the new access road on the west side of the road.

C.) The on-lease pipeline centerline shall be constructed 25 feet from the centerline of all existing access roads.

D.) The holder shall bury the pipeline in a trench 46 inches deep under all existing access roads.

E.) All operations shall be contained within the perimeters of the archaeological cleared areas.

3. All maintenance activity shall be confined within the authorized pipeline corridor width of 15 feet.

4. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

5. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain.

6. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under the Sundry Notice approval for construction of a surface pipeline.

7. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this approval. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

8. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the pipeline corridor (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline corridor), or resulting from other activities of the holder on the pipeline corridor. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

9. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipeline rupture, fire, or spills caused or substantially aggravated by any of the following within the pipeline corridor or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.

- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

- a. The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.
- b. This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

10. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any gas, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal land, the control and total removal, disposal, and cleaning up of such gas, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages resulting therefrom, on the Federal land, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

11. The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

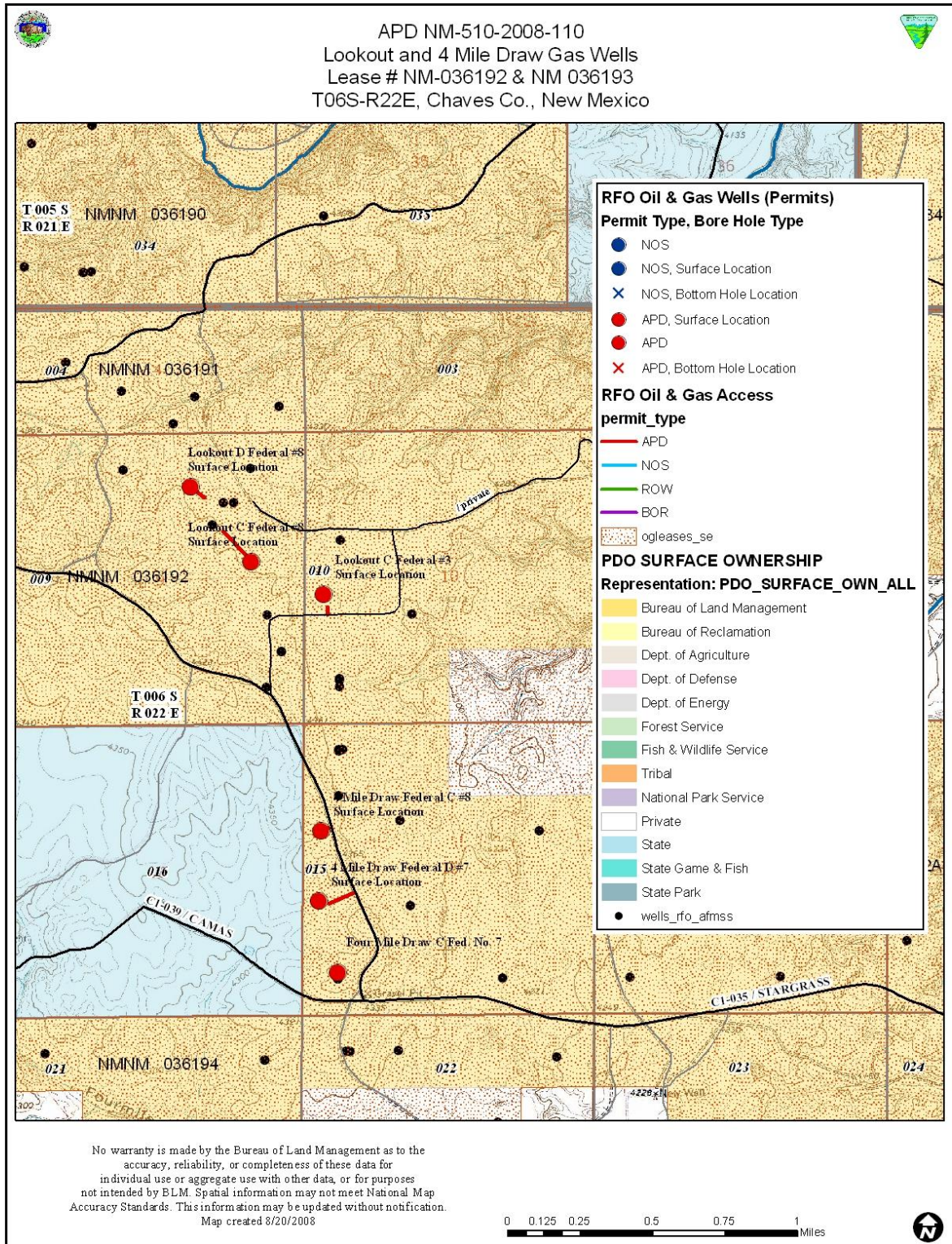
12. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for those being encountered and which are in accordance with sound resource management practices.

13. Excluding the pipe, all above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be Juniper Green, Standard Environmental Colors (June 2008).

14. The pipeline will be identified by signs at the point of origin and completion of the pipeline and at all road crossings. At a minimum, signs will state the holder's name, BLM leaser number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

Exhibit C Map



Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 W. Second Street
Roswell, New Mexico 88201

Project: Lookout D Federal #8
Location: Section: Unit B, Sec. 9, T06S-R22E
Applicant: McKay Oil Corporation
Roswell Field Office: (575) 627-0272

EA Log Number: NM-510-2008-110
Archaeological Report: 08-R-108A
Lease Number: NM-036192
File Code: 3160

Decision Record

Based upon the analysis, the proposed drilling of the Lookout D Federal #8 gas well located 990' FNL & 2160' FEL, Unit B, Sec. 9 T6S-R22E, NMPM, Chaves County, New Mexico, is approved. This includes a 250' x 250' well pad and a 60' x 60' reserve pit (submitted via Sundry Notice on September 11, 2008). This approval also includes 221' x 20' width of new on-lease access road construction and 221' x 20' of on-lease surface pipeline located within the roadway.

Rationale: The Bureau of Land Management staff has reviewed the environmental assessment and identified site-specific mitigation measures to avoid or minimize surface impacts resulting from the construction of this project. The well pad and access road and pipeline will remain as long term impacts. The cumulative impacts to the environment from existing and new development have been identified.

The Bureau of Land Management's approval of the APD does not relieve the lessee and operator from obtaining required authorizations from the private surface owner.

This proposed action is in compliance with the 1997 Roswell Resource Management Plan, as amended. This plan has been reviewed to determine if the proposed action conforms to the land-use planning terms and conditions required by 43 CFR 1610.5. This action does not conflict with existing Chaves County land-use planning or zoning.

Administrative Review and Appeal: Under BLM regulations, this Decision Record (DR) is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this DR must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, 1474 Rodeo Road, Santa Fe, NM 87505, no later than 20 business days after this DR is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Approved by:

/s/ Angel Mayes

10/06/2008

Date

Angel Mayes,
Assistant Field Manager,
Lands and Minerals

**EXHIBIT A
PECOS DISTRICT
ROSWELL FIELD OFFICE
CONDITIONS OF APPROVAL**

10/06/2008

Lookout D Federal #8
990' FNL & 2160' FEL, Unit B, Sec. 9 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36193

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or Paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or Paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL:

The operator shall stockpile the topsoil from the surface of the well pad which will be used for surface reclamation of the well pad. The topsoil to be stripped to approximately 6 inches in depth to conserve and establish a native seed bed that will be spread over the well pad upon final reclamation. The topsoil shall not be used to backfill the reserve pit and shall be used for interim and final reclamation of the well pad. The topsoil shall be stockpiled in the farthest side of the well pad away from the reserve pit.

C. RESERVE PITS:

The reserve pit shall be constructed and closed in accordance with current NMOCD rules.

The reserve pit shall be constructed 60' x 60' on the southwest side of the well pad in accordance with the Sundry Notice received September 11, 2008.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of four feet below ground level. Should the pit content level not meet the four foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of four feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend

a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes,

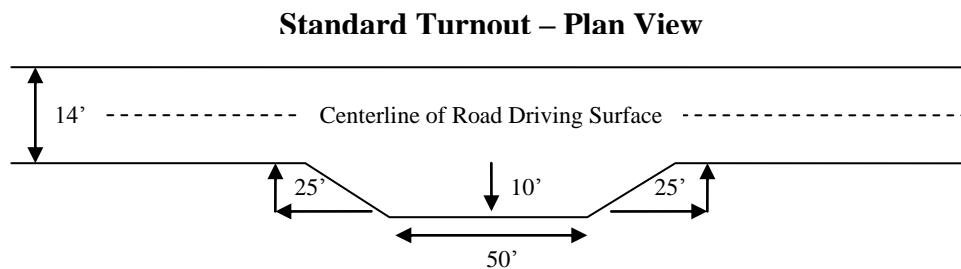
road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

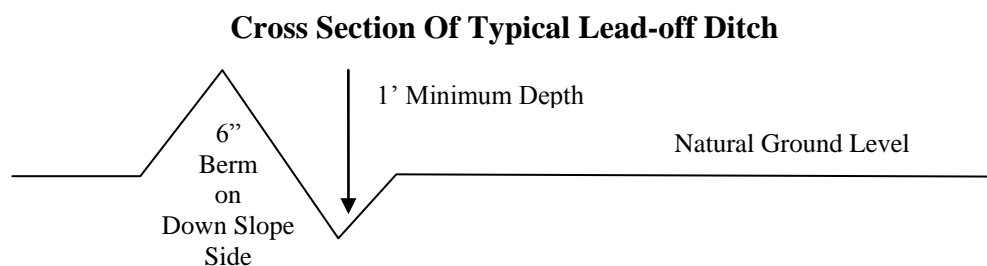
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Pipeline Protection Requirement

Precautionary measures shall be taken by the operator during construction of the access road to protect any existing pipeline(s) that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over each of the existing pipeline(s). The operator shall be held responsible for any damage to the existing pipeline(s). If the either pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline(s). The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

Cave/Karst

Impacts would be likely to occur to a significant subsidence Karst Air Hole feature due to oil pad traffic both human and vehicles. During drilling an underground void may be encountered. Fence the area around the Air Hole with a 30' by 30' woven wire fence 4' high. If during drilling the operator should encounter a significant void during drill operations, the drilling company is to suspend drilling and notify the Bureau of Land Management Roswell Field Office Outdoor Recreation Planner for further mitigation by calling Bill Murry at 575-627-0220.

Water Quality:

Surface and Groundwater

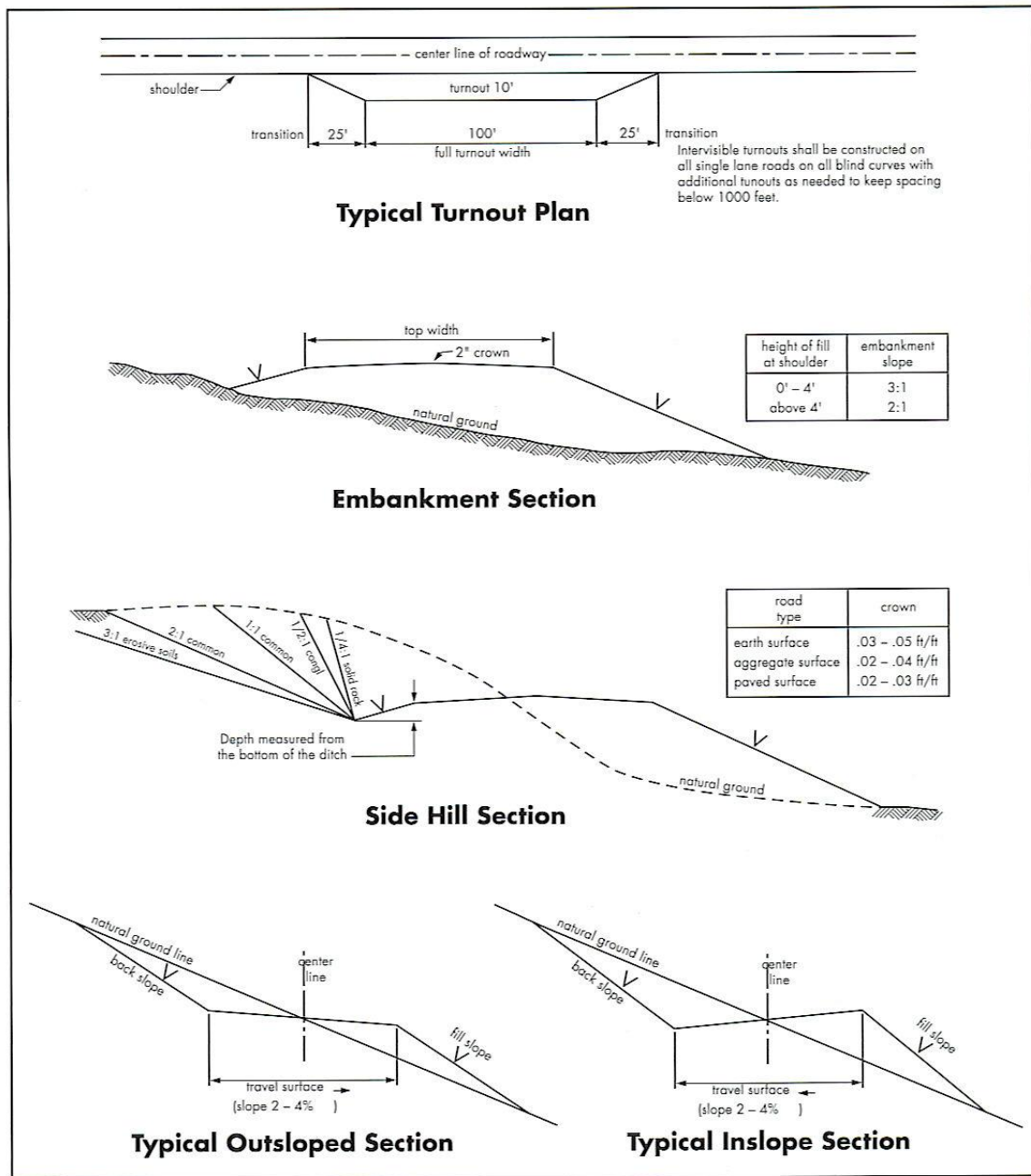
A surface drainage feature is located to the east of the Lookout D Federal #8. The pad size will be limited to 100 feet in the east and northeast direction. The edge of the pad will be constructed so that the pad surface will avoid the surface drainage feature. This will require that the surface disturbance of the pad remain 10 feet or more away from the western edge of the surface drainage feature. This mitigation will protect the integrity of the surface drainage feature.

The original mapped route for the access road for the Lookout D Federal #8 will impact and disturb the surface drainage located to the east. The access road has been relocated and staked to

the west of the surface drainage. This mitigation will protect the integrity of the surface drainage feature. All surface disturbing activities will avoid the surface drainage feature located to the east.

A surface drainage feature and a karst feature are located in the east/northeast direction of the Lookout D Federal #8 location. A containment structure or earthen dike shall be constructed and maintained around all sides of the outside boundary of the well pad. The containment structure or earthen dike shall be constructed two (2) feet high (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum). The containment structure or earthen dike is required so that if oilfield waste contaminant or product contaminant were leaked, spilled, and or released upon the well pad the oilfield waste contaminant or product contaminant shall be contained on the well pad and prevented from entering into the surface drainage feature located to the east/northeast and also the karst feature located to the east/northeast. This mitigation will prevent contaminants from entering into the surface drainage feature and the karst feature where contaminants may then enter into surface water and groundwater. The well pad will be constructed into a cut on a slope on the west side of the location where the uphill side of the well pad will not require the construction of the containment structure or earthen dike, but the construction of the containment structure or dike will be required on the North, East, and South sides of the well pad which will extend into the uphill portion of the well pad. The containment structure or earthen dike shall be maintained for the life of the well.

Figure 1 – Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1 Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, 24 hours at (575) 627-0205.

2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

5. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion

6. Air, air-mist or fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string. Any polymers used will be water based and non-toxic.

B. CASING

1. The 8 5/8 inch usable water protection casing string shall be set at approximately 950 ft. in competent bedrock.

If not the operator is required to set casing in the next thick competent bedding (i.e. 15 to 25 ft or greater) encountered and cemented to the surface.

a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.

- d. If cement falls back, remedial action will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **5-1/2** inch production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone**. If cement does not circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

C. PRESSURE CONTROL:

1. Before drilling below the **8-5/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.
2. Before drilling below the **8-5/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.
3. The BOPE shall be installed before drilling below the **8-5/8** inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
 - a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - b. The tests shall be done by an independent service company.
 - c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 - d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.
 - e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
 - f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

VI. PRODUCTION

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a semi-gloss non-reflective paint color, Juniper Green, Standard Environmental Colors (June 2008).

VRM Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer.

The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo “interim” reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

Upon closure of the reserve pit, all of the gypsum rock material that is excavated and removed from the reserve pit during reserve pit construction shall be placed back into the reserve pit below ground level.

The reserve pit, when dried and closed, shall be re-contoured, all trash removed, and reseeded as follows:

The following soil or soil associations may represent these ecological sites:

**Shallow SD-3 Ecological Site
Very Shallow, CP-4 Ecological Site**

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Blue grama	(<i>Bouteloua gracilis</i>)	3.00
Or Black grama	(<i>B. eriopoda</i>)	
Sideoats grama	(<i>Bouteloua curtipendula</i>)	2.00
New Mexico Feathergrass	(<i>Stipa neomexicana</i>)	1.00
Or Green sprangletop	(<i>Leptochloa dubia</i>)	
Desert or Scarlet Globemallow	(<i>Sphaeralcea ambigua</i> or <i>S. coccinea</i>)	1.00
Croton	(<i>Croton spp.</i>)	1.00
Buckwheat	(<i>Eriogonum spp.</i>)	<u>1.00</u>
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		9.00

Certified Weed Free Seed

If one species is not available increase ALL other proportionately.

Use no less than four (4) species, including one (1) forb.

No less than 9 pounds pls per acre shall be applied.

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.

b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

c. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.

**EXHIBIT B
ROSWELL FIELD OFFICE
PECOS DISTRICT
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

10/6/2008

Lookout D Federal #8
990' FNL & 2160' FEL, Unit B, Sec. 9 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36193

A. THE APD AND/OR THE SUNDRY NOTICE WAS USED FOR THE ON-LEASE SURFACE PIPELINE CONSTRUCTION.

1. The APD and/or Sundry Notice And Report On Wells can act, to the extent possible, as an application for the on-lease construction of the surface pipeline on Federal surface lands. In combination with the approved APD, the following standard terms and conditions are hereby attached to the APD/SN on-lease authorization.

B. The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The BLM shall administer compliance and monitor construction of the pipeline. Notify the Roswell Field Office of Surface Protection at least 3 working days prior to commencing construction of the pipeline at (575) 627-0247.

2. PIPELINE CONSTRUCTION:

A.) The on-lease pipeline (221 feet) shall be laid on the surface within a maximum disturbance width of 10 feet from the outer edge of the road and buried on the well pads 36 inches.

B.) The 2 inch steel pipeline shall parallel the new access road on the west side of the road.

C.) The on-lease pipeline centerline shall be constructed 25 feet from the centerline of all existing access roads.

D.) The holder shall bury the pipeline in a trench 46 inches deep under all existing access roads.

E.) All operations shall be contained within the perimeters of archaeological cleared areas.

3. All maintenance activity shall be confined within the authorized pipeline corridor width of 15 feet.

4. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

5. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain.

6. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under the Sundry Notice approval for construction of a surface pipeline.

7. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this approval. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

8. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the pipeline corridor (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline corridor), or resulting from other activities of the holder on the pipeline corridor. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

9. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipeline rupture, fire, or spills caused or substantially aggravated by any of the following within the pipeline corridor or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.

- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

- a. The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.
- b. This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

10. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any gas, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal land, the control and total removal, disposal, and cleaning up of such gas, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages resulting therefrom, on the Federal land, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

11. The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

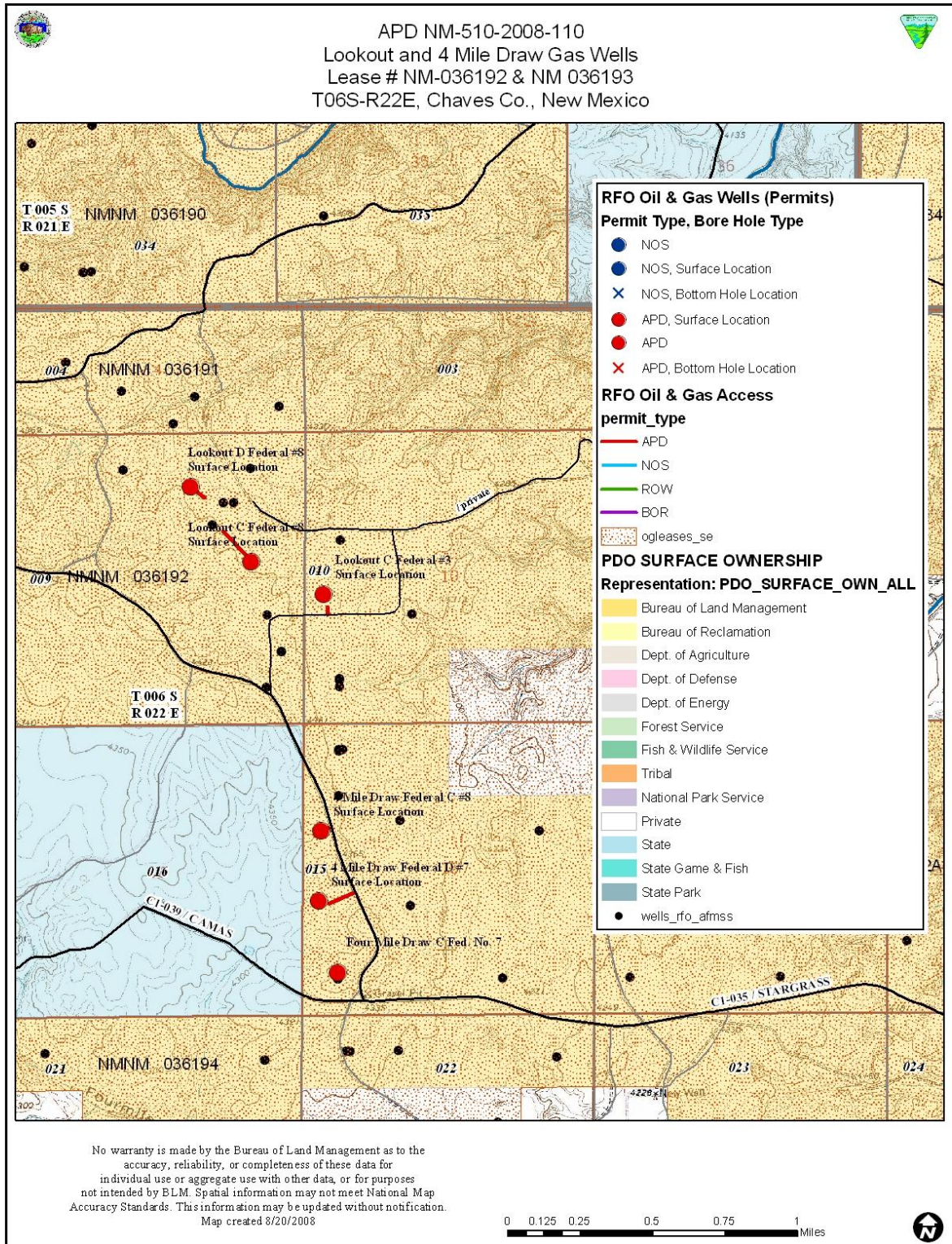
12. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for those being encountered and which are in accordance with sound resource management practices.

13. Excluding the pipe, all above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be Juniper Green, Standard Environmental Colors (June 2008).

14. The pipeline will be identified by signs at the point of origin and completion of the pipeline and at all road crossings. At a minimum, signs will state the holder's name, BLM leaser number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

Exhibit C General Location Map



Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 W. Second Street
Roswell, New Mexico 88201

Project: 4 Mile Draw Federal C #8
Location: Section: Unit E, Sec. 15, T06S-R22E
Applicant: McKay Oil Corporation
Roswell Field Office: (575) 627-0272

EA Log Number: NM-510-2008-110
Archaeological Report: 08-R-108A
Lease Number: NM-036193
File Code: 3160

Project: 4 Mile Draw Federal D #7
Location: Section: Unit L, Sec. 15, T06S-R22E
Applicant: McKay Oil Corporation
Roswell Field Office: (575) 627-0272

EA Log Number: NM-510-2008-110
Archaeological Report: 08-R-092A
Lease Number: NM-036193
File Code: 3160

Decision Record

Based upon the analysis, the proposed drilling of the 4 Mile Draw Federal D #7 gas well, located 2130' FSL & 330' FWL, Unit L, Sec. 15 T6S-R22E, NMPM, Chaves County, New Mexico, and 4-Mile Draw Federal C #8 gas well located 1950' FNL & 330' FWL, Unit E, Sec. 15 T6S-R22E, NMPM, Chaves County, New Mexico, are approved. This includes a 250' x 250' well pad and a 60' x 60' x 8' reserve pit (submitted via Sundry Notice on October 14, 2008) for each location.

This approval also grants an additional 900' x 20' on-lease right-of way for a 2" diameter surface pipeline on the 4-Mile Draw Federal C #8 and approximately 2000' x 20' on-lease right-of way for a 2" diameter surface pipeline located within the roadway on the 4 Mile Draw Federal D #7.

Rationale: The Bureau of Land Management staff has reviewed the environmental assessment and identified site-specific mitigation measures to avoid or minimize surface impacts resulting from the construction of this project. The well pad and access road and pipeline will remain as long term impacts. The cumulative impacts to the environment from existing and new development have been identified.

The Bureau of Land Management's approval of the APD does not relieve the lessee and operator from obtaining required authorizations from the private surface owner.

This proposed action is in compliance with the 1997 Roswell Resource Management Plan, as amended. This plan has been reviewed to determine if the proposed action conforms to the land-use planning terms and conditions required by 43 CFR 1610.5. This action does not conflict with existing Chaves County land-use planning or zoning.

Administrative Review and Appeal: Under BLM regulations, this Decision Record (DR) is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this DR must include information required under 43 CFR 3165.3(b)

(State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, 1474 Rodeo Road, Santa Fe, NM 87505, no later than 20 business days after this DR is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Approved by:

/s/ Jerry Dutchover

10/16/2008

Date

For Angel Mayes,
Assistant Filed Manager,
Lands and Minerals

**EXHIBIT A
PECOS DISTRICT
ROSWELL FIELD OFFICE
CONDITIONS OF APPROVAL**

10/16/2008

4-Mile Draw Federal C #8
1950' FNL & 330' FWL, Unit E, Sec. 15 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36192

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or Paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or Paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

A surface water turnout is located on the west side of County Road 37 which enters into the proposed location of the 4 Mile Draw Federal C #8. The Chaves County Road Department shall be notified and will reconstruct the county road at this location which will divert runoff water to the east side of the county road at this location. Water runoff will no longer flow to the west of the County Road 37 at this location and the water turnout to the west will be removed. This mitigation will prevent water runoff from County Road 37 from entering into the 4 Mile Draw Federal C #8 well location.

B. TOPSOIL:

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped to approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and shall be used for interim and final reclamation of the well pad. The topsoil shall be stockpiled in the farthest side of the well pad away from the reserve pit.

C. RESERVE PITS:

The reserve pit shall be constructed and closed in accordance with current NMOCD rules.

The reserve pit shall be constructed 60' x 60' x 8'.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of four feet below ground level. Should the pit content level not meet the four foot minimum depth requirement, the excess contents shall be removed

until the required minimum depth of four feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

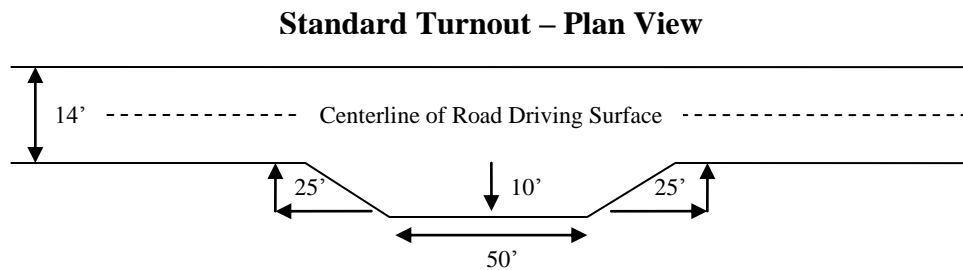
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

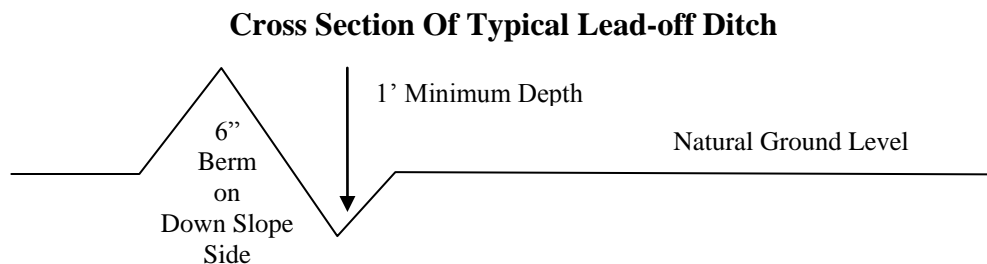
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

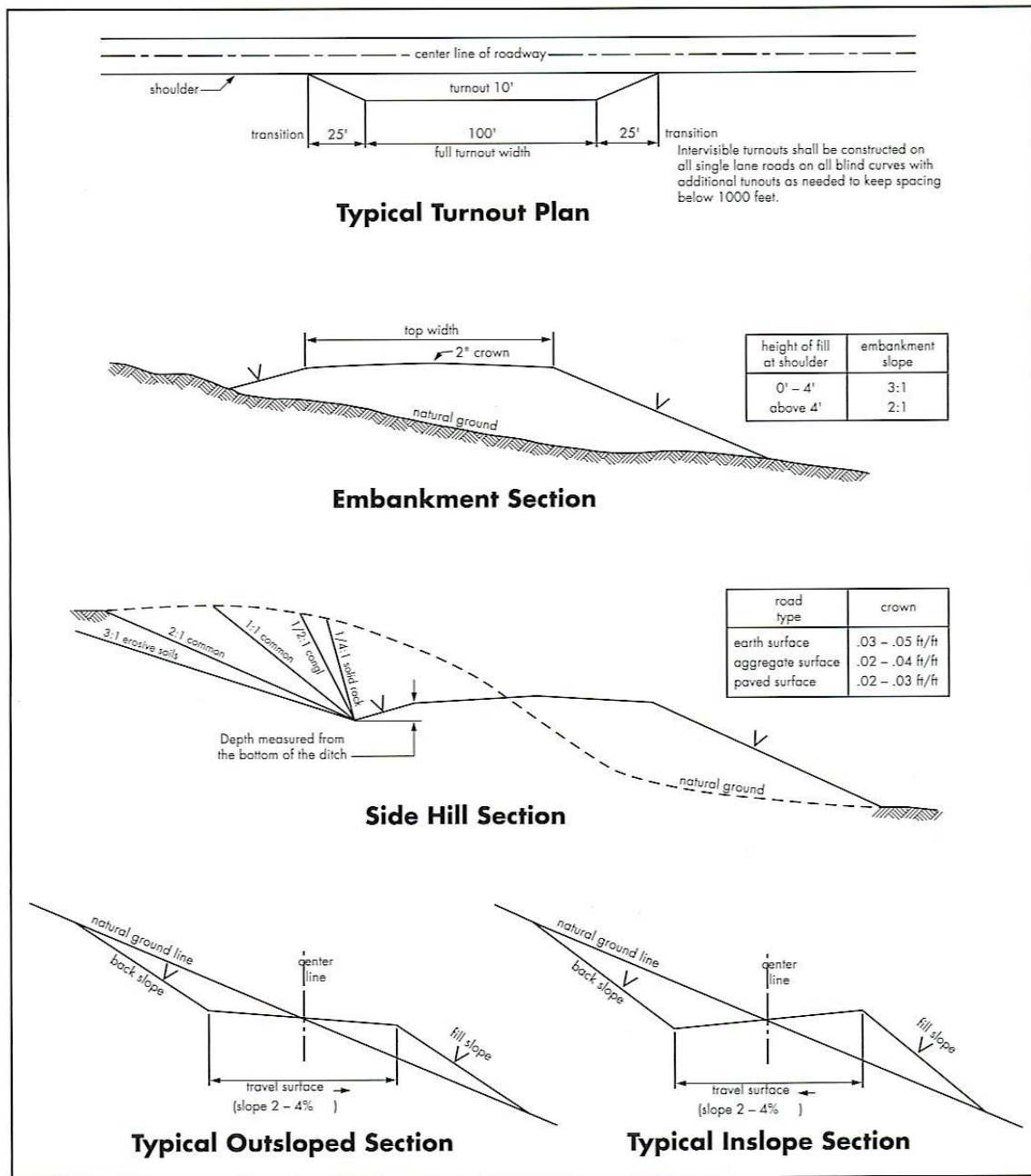
Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Pipeline Protection Requirement

Precautionary measures shall be taken by the operator during construction of the access road to protect any existing pipeline(s) that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over each of the existing pipeline(s). The operator shall be held responsible for any damage to the existing pipeline(s). If the either pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline(s). The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

Figure 1 – Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1 Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, 24 hours at (575) 627-0205.

2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

5. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion

6. Air, air-mist or fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string(s). Any polymers used will be water based and non-toxic.

B. CASING

2. The 8 5/8 inch usable water protection casing string shall be set at approximately 950 ft. in competent bedrock.

If not the operator is required to set casing in the next thick competent bedding (i.e. 15 to 25 ft or greater) encountered and cemented to the surface.

a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **5-1/2** inch production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone**. If cement does not circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

C. PRESSURE CONTROL:

1. Before drilling below the **8-5/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.

2. Before drilling below the **8-5/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

3. The BOPE shall be installed before drilling below the **8-5/8** inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

b. The tests shall be done by an independent service company.

c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.

e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.

f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

D. DRILLING MUD

1. Fresh water and non toxic drilling mud shall be used to drill the 12-1/4 inch hole for the 8-5/8 inch surface casing to be set at approximately 950 feet.

VI. PRODUCTION

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a semi-gloss non-reflective paint color, Juniper Green, Standard Environmental Colors (June 2008).

VRM Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer.

The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo “interim” reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of re-vegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing re-vegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be re-vegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

Upon closure of the reserve pit, all of the gypsum rock material that is excavated and removed from the reserve pit during reserve pit construction shall be placed back into the reserve pit below ground level.

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Gravelly SD-3 Ecological Site		
Common Name Pounds of Pure and Preferred Variety	Scientific Name	Live Seed Per Acre
Blue grama	(<i>Bouteloua gracilis</i>)	1.50
Sideoats grama,	(<i>Bouteloua curtipendula</i>)	1.50
Sand dropseed	(<i>Sporobolus cryptandrus</i>)	0.50
Plains bristlegrass	(<i>Setaria macrostachya</i>)	2.50
Vine mesquite	(<i>Panicum obtusum</i>)	1.50
Desert or Scarlet	(<i>Sphaeralcea ambigua</i>)	1.00
Globemallow	or (<i>S. coccinea</i>)	
Croton or	(<i>Croton spp.</i>) or	
Desert zinnia	(<i>Zinnia grandiflora</i>)	<u>0.50</u>
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		9.00

Certified Weed Free Seed

If on species is not available, increase **ALL** others proportionately. **NOT JUST ONE SPECIES!**

Use at least 4 species, including 1 forb

No less than 9.0 pounds lbs per acre shall be applied

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.

b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

c. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.

EXHIBIT B
ROSWELL FIELD OFFICE
PECOS DISTRICT
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

10/16/2008

4-Mile Draw Federal C #8
1950' FNL & 330' FWL, Unit E, Sec. 15 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36192

A. THE APD AND/OR THE SUNDRY NOTICE WAS USED FOR THE ON-LEASE SURFACE PIPELINE CONSTRUCTION.

1. The APD and/or Sundry Notice And Report On Wells can act, to the extent possible, as an application for the on-lease construction of the surface pipeline on Federal surface lands. In combination with the approved APD, the following standard terms and conditions are hereby attached to the APD/SN on-lease authorization.

B. The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The BLM shall administer compliance and monitor construction of the pipeline. Notify the Roswell Field Office of Surface Protection at least 3 working days prior to commencing construction of the pipeline at (575) 627-0247.

2. PIPELINE CONSTRUCTION:

A.) The on-lease pipeline (100 feet) shall be laid on the surface within a maximum disturbance width of 10 feet from the outer edge of the road and buried on the well pads 36 inches.

B.) The 2 inch steel pipeline shall parallel the new access road on the west side of the road.

C.) The on-lease pipeline centerline shall be constructed 25 feet from the centerline of all existing access roads.

D.) The holder shall bury the pipeline in a trench 46 inches deep under all existing access roads.

E.) All operations shall be contained within the perimeters of the archaeological cleared areas.

3. All maintenance activity shall be confined within the authorized pipeline corridor width of 15 feet.

4. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

5. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain.

6. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public land under the Sundry Notice approval for construction of a surface pipeline.

7. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this approval. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

8. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the pipeline corridor (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline corridor), or resulting from other activities of the holder on the pipeline corridor. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

9. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipeline rupture, fire, or spills caused or substantially aggravated by any of the following within the pipeline corridor or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.

- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

- a. The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.
- b. This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

10. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any gas, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal land, the control and total removal, disposal, and cleaning up of such gas, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages resulting therefrom, on the Federal land, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

11. The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

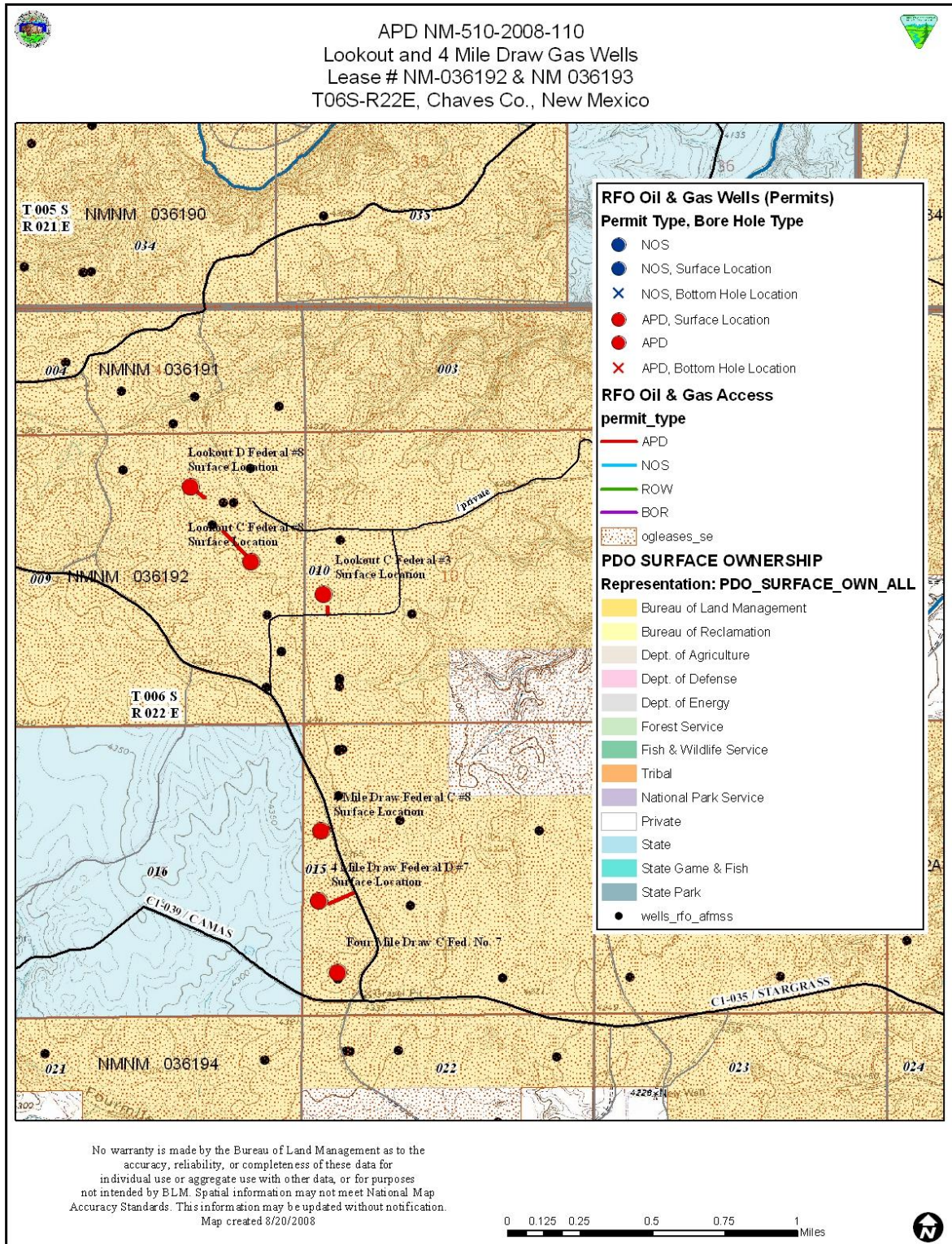
12. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for those being encountered and which are in accordance with sound resource management practices.

13. Excluding the pipe, all above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be Juniper Green, Standard Environmental Colors (June 2008).

14. The pipeline will be identified by signs at the point of origin and completion of the pipeline and at all road crossings. At a minimum, signs will state the holder's name, BLM leaser number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

Exhibit C Map



**EXHIBIT A
PECOS DISTRICT
ROSWELL FIELD OFFICE
CONDITIONS OF APPROVAL**

10/16/2008

4 Mile Draw Federal D #7
2130' FSL & 330' FWL, Unit L, Sec. 15 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36192

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or Paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or Paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL:

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped to approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and shall be used for interim and final reclamation of the well pad. The topsoil shall be stockpiled in the farthest side of the well pad away from the reserve pit.

C. RESERVE PITS:

The reserve pit shall be constructed and closed in accordance with current NMOCD rules.

The reserve pit shall be constructed 60 x 60' x 8' on the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of four feet below ground level. Should the pit content level not meet the four foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of four feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

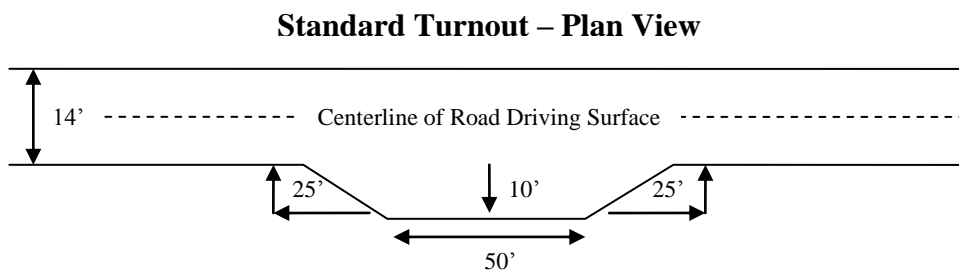
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

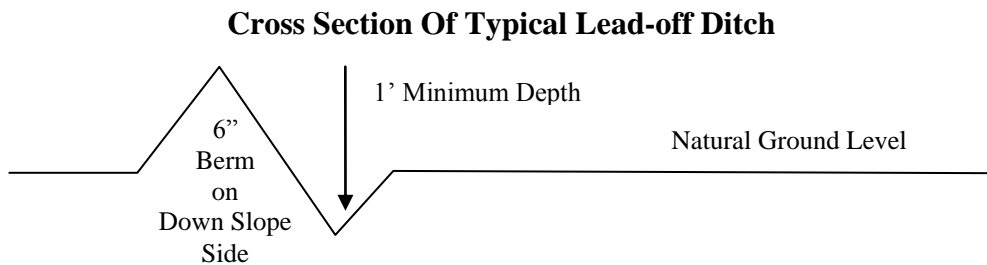
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

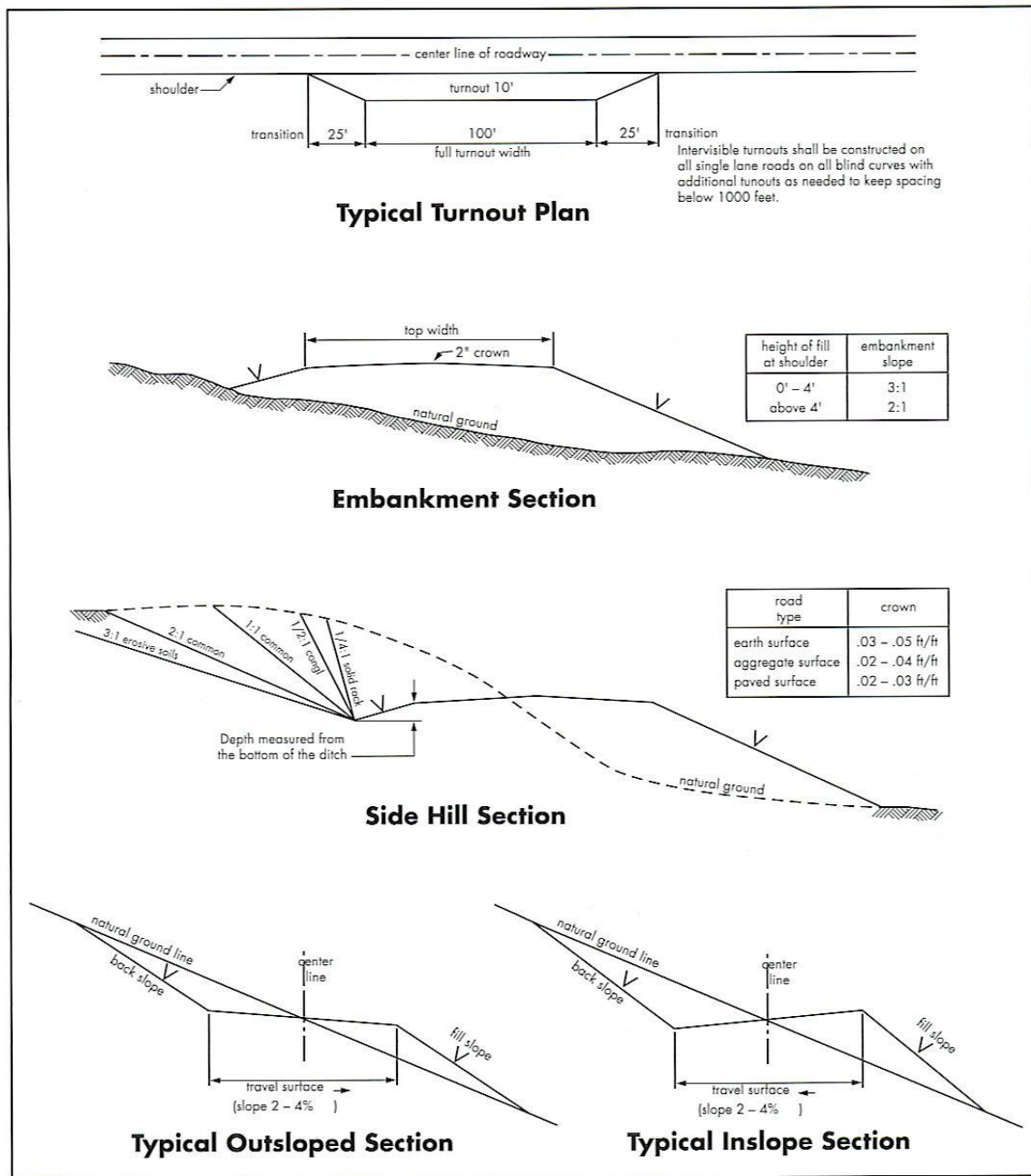
Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Pipeline Protection Requirement

Precautionary measures shall be taken by the operator during construction of the access road to protect any existing pipeline(s) that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over each of the existing pipeline(s). The operator shall be held responsible for any damage to the existing pipeline(s). If the either pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline(s). The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

Figure 1 – Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201.

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.

2. The Roswell Field Office is to be notified a minimum of 24 hours in advance for a representative to witness:

a. Spudding

b. Cementing casing: **8-5/8 inch 5-1/2 inch**

The Roswell Field Office is to be notified a minimum of 4 hours in advance for a representative to witness

BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

B. CASING:

1. The **8-5/8** inch surface casing shall be set **at approximately 950 feet** and cemented to the surface.

a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

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3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

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1. Before drilling below the 8-5/8 inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.
2. Before drilling below the 8-5/8 inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.
3. The BOPE shall be installed before drilling below the 8-5/8 inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
 - a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - b. The tests shall be done by an independent service company.
 - c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
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 - e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
 - f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

D. DRILLING MUD

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At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

Upon closure of the reserve pit, all of the gypsum rock material that is excavated and removed from the reserve pit during reserve pit construction shall be placed back into the reserve pit below ground level.

The reserve pit, when dried and closed, shall be re-contoured, all trash removed, and reseeded as follows:

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Vine mesquite	<i>(Panicum obtusum)</i>	1.50
Desert or Scarlet	<i>(Sphaeralcea ambigua)</i>	1.00
Globemallow or	<i>(S. coccinea)</i>	
Croton or	<i>(Croton spp.)</i> or	
Desert zinnia	<i>(Zinnia grandiflora)</i>	<u>0.50</u>
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		9.00

Certified Weed Free Seed.

If one species is not available, increase ALL others proportionately.

Use No Less than 4 species, including one forb.

No less than 9.0 pounds pls per acre shall be applied

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.

b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

c. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.

**EXHIBIT B
ROSWELL FIELD OFFICE
PECOS DISTRICT
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

10/16/2008

4 Mile Draw Federal D #7
2130' FSL & 330' FWL, Unit L, Sec. 15 T6S-R22E
Chaves County, New Mexico NMPM
McKay Oil Corporation
NM-36192

A. THE APD AND/OR THE SUNDRY NOTICE WAS USED FOR THE ON-LEASE SURFACE PIPELINE CONSTRUCTION.

1. The APD and/or Sundry Notice And Report On Wells can act, to the extent possible, as an application for the on-lease construction of the surface pipeline on Federal surface lands. In combination with the approved APD, the following standard terms and conditions are hereby attached to the APD/SN on-lease authorization.

B. The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The BLM shall administer compliance and monitor construction of the pipeline. Notify the Roswell Field Office of Surface Protection at least 3 working days prior to commencing construction of the pipeline at (575) 627-0247.

2. PIPELINE CONSTRUCTION:

A.) The on-lease pipeline (507 feet) shall be laid on the surface within a maximum disturbance width of 10 feet from the outer edge of the road and buried on the well pads 36 inches.

B.) The 2 inch steel pipeline shall parallel the new access road on the west side of the road.

C.) The on-lease pipeline centerline shall be constructed 25 feet from the centerline of all existing access roads.

D.) The holder shall bury the pipeline in a trench 46 inches deep under all existing access roads.

E.) All operations shall be contained within the perimeters of the archaeological cleared areas.

3. All maintenance activity shall be confined within the authorized pipeline corridor width of 15 feet.
4. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
5. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain.
6. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under the Sundry Notice approval for construction of a surface pipeline.
7. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this approval. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
8. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the pipeline corridor (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline corridor), or resulting from other activities of the holder on the pipeline corridor. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
9. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipeline rupture, fire, or spills caused or substantially aggravated by any of the following within the pipeline corridor or permit area:
 - a. Activities of the holder including, but not limited to construction, operation, maintenance and termination of the facility.
 - b. Activities of other parties including, but not limited to:
 - (1) Land clearing.

- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

- a. The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.
- b. This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

10. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any gas, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal land, the control and total removal, disposal, and cleaning up of such gas, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages resulting therefrom, on the Federal land, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

11. The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

12. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for those being encountered and which are in accordance with sound resource management practices.

13. Excluding the pipe, all above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be Juniper Green, Standard Environmental Colors (June 2008).

14. The pipeline will be identified by signs at the point of origin and completion of the pipeline and at all road crossings. At a minimum, signs will state the holder's name, BLM leaser number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadwa

Exhibit C Map

